ISSUE SLIP

Date of Issue	Issue Number	Date of Issue	Issue Number

59

IMPERIAL GAZETTEER OF INDIA

VOLUME XVIII

Moram.—Town in the Tuljāpur *tāluk* of Osmānābād District, Hyderābād State, situated in 17° 47′ N. and 76° 29′ E. Population (1901), 5,692. Large quantities of grain and jaggery are exported from here via Sholāpur and Akalkot. Two weekly bazars are held—one on Sundays for general trade, and the other on Mondays for the sale of cloth only. A new bazar, Osmānganj, is under construction. Moram contains a school.

Morār (*Murār*).—Cantonment in the Gwalior State, Central India, situated in 26° 14′ N. and 78° 14′ E., 2 miles from the Morār Road station on the Great Indian Peninsula Railway, and on the banks of the Morār river, a small stream tributary to the Vaisali. Population (1901), 19,[illegible] In former days the waters of the river were dammed up so as to [illegible] cons[illegible] lake, which was noted for the species of fish known [illegible]nsis which abounded in it. The town lies 4 miles [illegible] which it is connected by a broad road. T[illegible] laid out on the usual plan, but is remarkable for the [illegible]ine avenues of large trees which line the roads. The substan[illegible] stone barracks built in 1870 for the British troops are now occupied by the State regiments, the officers' bungalows being used by European and native officials in the State service.

Morār was founded in 1844 as a cantonment for the Gwalior Contingent, the brigadier in command and a force of all three arms being [illegible]. In 185[illegible] the most serious [illegible] Central India took [illegible] signs of disaffectio[illegible] the men of the contingent [illegible] discernible; and on June 14 [illegible]ops mutinied, and killed six office[illegible] clergyman, and several Europeans. The rest escaped to Agra with the assistance of the M[illegible]ājā. On May 30, 1858, Morār was occupied by the troops of Tāntiā [illegible] the Nawāb of Bāndā, and the Rānī of Jhānsi, who forced Sindhia to [illegible] Lashkar and retreat to Agra. On June 16 Sir Hugh Rose dr[illegible] Tāntiā Topi out of Morār, and on the 20th reinstated Sindhia in [illegible] capital. Morār remained a British cantonment, garrisoned by a mixed

force of British and Native troops, till 1886, when it was handed over to Gwalior in connexion with the exchanges of territory which took place then. The State troops now occupying the cantonment are a regiment of Imperial Service Cavalry, the Imperial Service Transport Corps, three batteries, and two infantry regiments. Morār has of late years become a considerable trading centre, especially for grain, the local dues being lighter than those obtaining in Lashkar. Impetus has been given to the tanning industry by the establishment of the State leather factory in the cantonment. The town contains a European church, a State post office, a school for boys and another for girls, and two hospitals, one military and the other civil, and four large European cemeteries. Just beyond the cantonment limits is the Alījāh Club for European residents.

Morchopna.—Petty State in KĀTHIĀWĀR, Bombay.

Moro.—*Tāluka* in Hyderābād District, Sind, Bombay, lying between 26° 23′ and 26° 55′ N. and 67° 52′ and 68° 20′ E., with an area of 402 square miles. The population in 1901 was 66,641, compared with 57,646 in 1891; the density is 166 persons per square mile. The number of villages is 78, of which Moro is the head-quarters. Land revenue and cesses in 1903–4 amounted to about 1·3 lakhs. The *tāluka* has now lost its barren and sandy tracts, which have been transferred to Nasrat. The chief [illegible] indigo, gram, and rapeseed [illegible]

Morrelganj.—[illegible] in the Bagherhāt subdivision of [illegible] District [illegible] situated in 22° 27′ N. [illegible] 52′ [illegible] 2½ [illegible] above its confluence with [illegible] Haringhāta, of which it is a [illegible] Population [illegible] relganj was formerly the property of M[illegible] Morrel and [illegible] converted this part of the country from impenetrable jungle [illegible] rice-growing tract dotted with thriving villages. [illegible] about a quarter of a mile broad, with deep water [illegible] bank [illegible] affording good holding ground for ships, [illegible] well [illegible] declared a port by the Government of Bengal in [illegible] 1869, [illegible] buoys were laid down in the following month; but the [illegible] to make it an entrepôt for [illegible] trade was not attended with [illegible] position on a [illegible] navigable river, commanding [illegible] however, ren[illegible] a great [illegible] local trade [illegible] steamer st[illegible] of the Cachar [illegible] Sundarbans ser[illegible]

Morsī Tāluk.—*Tāluk* [illegible] Amraoti District, [illegible] lying between 21° [illegible] and 21° 34′ N. and 77° 48′ and 78° 29′ [illegible] with an area of [illegible] square miles. The population fell from 15[illegible],374 in 1891 to [illegible]3,734 in 1901, its density in the latter year being 231 persons per square mile. The *tāluk* contains 231 villages and four towns, M[illegible] (population, 8,313), the head-quarters, [illegible] (7,179), [illegible]

(6,860), and NER PINGLAI (5,408). The demand for land revenue in 1903-4 was Rs. 5,18,000, and for cesses Rs. 41,000. The *tāluk* lies chiefly in the fertile valley of the Wardhā river, which bounds it on the east and south-east; but a narrow tract along its north-western border occupies the lower slopes of the SĀTPURĀ HILLS.

Morsī Town.—Head-quarters of the *tāluk* of the same name in Amraotī District, Berār, situated in 21° 20′ N. and 78° 4′ E. Population (1901), 8,313. The town contains eight ginning factories and two cotton-presses, and a Subordinate Judge and a Munsif hold their courts here.

Morvi State.—State in the Kāthiāwār Political Agency, Bombay, lying between 22° 23′ and 23° 6′ N. and 70° 30′ and 71° 3′ E., with an area of 822 square miles. The country is generally flat. The river *Machhu*, on which the town of Morvi stands, never runs dry, and is crossed by a good bridge. The climate near the coast is good, but fever is common throughout the State. The annual rainfall averages 23 inches.

The Thākur Sāhib of Morvi claims to be directly descended from the Cutch line and not through the Navānagar family. He possesses a small subdivision in Cutch with a port at Jangi. Many disputes have arisen with the Rao of Cutch regarding this port and the sea-borne trade. The differences which exist between the two States find [illegible] obstructions offered to the trade [illegible] tion represents the [illegible] descendant of the eldest son of the Rao of Cutch [illegible] seventeenth century, was murdered by [illegible] brother, and whose family thereupon [illegible] ace, then [illegible] dependency of [illegible] session of [illegible] was [illegible] sanctioned by the [illegible] early twe[illegible]. The chief [illegible] Government as [illegible] in 180[illegible] authorizing adoption, and [illegible] succession of the [illegible] primogeniture. The chief is entitled [illegible] salute of [illegible]. The present chief was [illegible] K.C.I.E. in 18[illegible] and subsequently in 1897 [illegible] I.E.

The population at the last four enumerations was: (1872) [illegible], (1881) [illegible], (18[illegible]) 105,335, and (1901) 87,496, the [illegible] decrease [illegible] during the last decade [illegible] to the famine of 1899 [illegible] Hindus numbered [illegible], Musalmāns [illegible] and [illegible] capital is MORVI TOWN, and there are 140 villages.

[illegible] sugar-cane [illegible] cotton are the principal products. The area cultivated is 343½ square miles, of which 3½ square miles are irrigated. [illegible] is provided by 4,257 wells and by the Paneli water-works, [illegible] 1,238 *bīghas*. A veterinary hospital is maintained; and [illegible] is carried on by 14 stallions and 240 mares. Salt and [illegible] are manufactured. A cotton-mill, established by the State [illegible] years ago, has recently been closed; but a cotton-

ginning factory and gas-works are still maintained. The chief articles of export are cotton, oil, *ghī*, wool, grain, hides and horns; and the chief articles of import are timber, cotton cloth, oil, and coal. The total trade by sea and land amounted in 1903–4 to about 31 lakhs; namely, imports 12 lakhs, and exports about 9 lakhs.

The State owns the port of Vavānia, on the Gulf of Cutch, and maintains a good road between Morvi and Rājkot. A tramway runs from Morvi to the port of Navlakhi. The State railway, nearly 90 miles in length, known as the Morvi line, has been partly converted to the metre gauge; it pays a dividend of about 5 per cent. Steam and oil launches are maintained by the State for traffic between Navlakhi port and Khari Rohar.

Morvi ranks as a first-class State in Kāthiāwār. The chief has full power over his own people, the trial of British subjects for capital offences requiring the previous permission of the Agent to the Governor. He enjoys an estimated revenue of more than 7½ lakhs (excluding the railway), chiefly derived from land (4½ lakhs), and pays a tribute of Rs. 61,559 jointly to the British Government, the Gaikwār of Baroda, and the Nawāb of Junāgarh. The State contains four municipalities. In 1905 an armed police force of 176 men was maintained; there are also 15 mounted men. The State contains a Central jail and four subsidiary jails, with a daily average of 102 prisoners. In 1903–4 there were 49 schools, with a total of 2,086 pupils, of whom 155 are girls; and 6 medical institutions, treating 25,000 patients. In the same year about 1,900 persons were vaccinated.

Morvi Town (*Morbi*).—Chief town of [illegible] State of the same name in Kāthiāwār, Bombay, situated in 22° 4[illegible] and 70° 53′ E., on the west bank of the river Machhu, which 22 [illegible] farther north enters the Gulf of Cutch. Population (1901), 17,820. Morvi is the terminus of the Morvi State Railway, 35 miles distant from Rājkot. Old Morvi, said to have been founded by Mor Jethwa, is situated on the eastern bank of the river, about a mile from the present town. It was called Mordhvajpuri and afterwards Bhimor. The present town is said to derive its name from the Morbo hill where Sanghji Jethwa defeated a Vāghela Rānā, and in commemoration of his conquest [illegible] present town on the opposite bank of the river [illegible] Afterwards when Mordhvajpuri became waste in [illegible] of the end of the fifteenth and beginning of the sixte[illegible] century, most of the wealthy inhabitants removed their dwellings to the present site in order to place the river between them and the foreign invader. A made road connects Morvi with the port of Vavānia and the town of Tankāra. The town contains a public park and a library and several fine buildings.

Motā Kotarna.—Petty State in MAHĪ KĀNTHA, Bombay.

Moth.—North-western *tahsīl* of Jhānsi District, United Provinces, conterminous with the *pargana* of the same name, lying between 25° 32′ and 25° 50′ N. and 78° 46′ and 79° 7′ E., with an area of 279 square miles. Population fell from 59,089 in 1891 to 55,638 in 1901. There are 136 villages and two towns: Chīrgaon (population, 4,028) and Moth (2,937), the *tahsīl* head-quarters. The demand for land revenue in 1903-4 was Rs. 1,17,000, and for cesses Rs. 19,000. The density of population, 199 persons per square mile, is slightly above the District average. The Betwā flows through the centre of the *tahsīl*. The villages along its banks are liable to injury from the erosion in ravines, and those east of the river are largely overgrown by *kāns* (*Saccharum spontaneum*), which prevents cultivation. West of the Betwā good black soil is found in the north of the *tahsīl*, where it is protected and enriched by embankments, while in the south, where the soil is lighter, there is a little irrigation. There is excellent grazing for cattle, and large quantities of *ghī* are exported from Chīrgaon. In 1902-3 the cultivated area was 118 square miles, of which only 2 were irrigated.

Motīhāri Subdivision.—Head-quarters subdivision of Champāran District, Bengal, lying between 26° 16′ and 27° 1′ N. and 84° 30′ and 85° 18′ E., with an area of 1,518 square miles. The subdivision consists of an alluvial tract traversed by the Sikrāna river, in which the land is level, fertile, and highly cultivated. The population in 1901 was 1,040,599, compared with 1,099,600 in 1891. The slight decrease was due to the famine of 1897, which stimulated emigration and diminished the fecundity of the people. The density is 686 persons per square mile, or nearly twice as high as in the Bettiah subdivision. It contains one town, MOTĪHĀRI (population, 13,730), the head-quarters; and 1,304 villages. Interesting archaeological remains are found at ARARĀJ and KESARIYĀ. SAGAULI was the scene of an outbreak in the Mutiny.

Motīhāri Town.—Head-quarters of Champāran District, Bengal, situated in 26° 40′ N. and 84° 55′ E. Population (1901), 13,730. Motīhāri was constituted a municipality in 1869. The income during [illegible] 1901-2 averaged Rs. 16,000, and the expenditure [illegible] 1903-4 the income was Rs. 22,000, of which Rs. 8,000 was derived from [illegible] houses and lands, and Rs. 3,000 from a municipal market; and the expenditure was Rs. 17,000. The town is pleasantly situated on the east bank of a lake, and contains the usual public offices, a jail, and a school. The jail has accommodation for 166 prisoners; the chief industries carried on are oil-pressing, *darī*-weaving, net-making, and the manufacture of string money-bags. Motīhāri is the head-quarters of a troop of the Bihār Light Horse.

Moulmein Subdivision.—Subdivision and township in the north-

west corner of Amherst District, Lower Burma, with an area of 30 square miles, 15 of which are comprised in the Moulmein municipality and 6 in Moulmein port. The township contains that part of the District (outside municipal limits) which lies north of the Gyaing river, where Kado (population, 2,934), an important forest dépôt, is situated. The population, excluding the Moulmein municipality and port, was 8,168 in 1901 (chiefly Talaings and Burmans), distributed in 40 villages. The area cultivated in 1903–4 was 16 square miles, paying Rs. 23,400 land revenue.

Moulmein Town (Burmese, *Mawlamyaing*).—Head-quarters of Amherst District and of the Tenasserim Division of Lower Burma, situated in 16° 29′ N. and 97° 38′ E., 28 miles from the sea, on the left bank of the Salween, at its confluence with the Gyaing and Ataran. In configuration the town has roughly the form of an inverted 'L', the portion represented by the horizontal line following the course of the Salween, and that represented by the vertical line the course of the Ataran. The former contains four divisions of the town, the latter one.

As a British settlement, Moulmein dates from the year 1827, when it was selected by General Sir Archibald Campbell as the capital for the newly acquired Tenasserim province, its claims being held superior to those of Amherst in the south and Martaban in the west. One of Moulmein's chief titles to fame is the great beauty of the scenery in which it is set. The visitor entering the river from the Gulf of Martaban is met by banks crowned with the most varied of evergreen foliage, a marked contrast to the low-lying muddy flats that characterize the mouths of the Hooghly or Irrawaddy. Right and left, parallel with the banks, are low ranges of hills, on which are perched pagodas here and there; and up the river beyond the town a limestone eminence about 2,000 feet in height, known as the Duke of York's Nose, stands in bold relief against the sky. From the plains surrounding the town isolated limestone rocks rise abruptly, forming one of the most marked characteristics of the Moulmein scenery.

Coming to the town itself, through the horizontal arm of the inverted 'L' runs a range of hills 300 feet in height, on which are built two magnificent pagodas, the Uzina and Kyaikthanlan, the former in the centre, the latter at the northern end. Midway between the two is a third pagoda, from which the midday gun is fired and ships are signalled. From this ridge a view, hardly to be equalled in Burma for beauty, is obtained of Moulmein nestling among the trees on the western slopes. To the north and west lie the meeting-place of the rivers, the shipping in the stream, the wooded islands in the channel, Martaban with its glistening pagoda overhanging the water, and the dark hills of Bilugyun. To the east, the Ataran may be seen winding through the green plain, and the Taungwaing hills rise up in the south.

The town, which has an area of 15 square miles, is laid out on a fairly regular plan, but is not altogether worthy of its gorgeous setting. It stretches, long and narrow, along the bank of the Salween. Three main roads run north and south, parallel to the river, two throughout the entire length of the town, and one for about 2 miles. Numerous cross-roads, mostly unmetalled, run east and west, one being continued by means of the Nyaungbinzeik ferry into the country beyond the Ataran, thus forming the main avenue by which food-supplies are brought into Moulmein. The European residences are situated to the west of the central ridge, for the most part in spacious and well-kept grounds. The most notable buildings are Salween House, the official residence of the Commissioner, built on the ridge; the masonry law courts and Government offices, at the foot of the rising ground; the General Hospital; the Government schools; and three churches, St. Matthew's, St. Patrick's, and St. Augustine's. The old cantonment, from which the troops have now been removed, centres around a parade-ground towards the north of the town. The business quarter adjoins the river bank in the west. The new jail lies at the foot of the ridge towards the northern end of the town in the old cantonment area. A blot on Moulmein at present is the indiscriminate way in which cooly barracks, native hamlets (*bastīs*), and lodging-houses have been allowed to spring up in all the quarters. The *bastīs* are composed of long narrow houses on three sides of a square, divided into small windowless compartments. The back-yard is common to the inmates of all the houses, and contains a shallow well from which both bathing and drinking water is obtained. Near it are cesspits; goats and calves find a hospitable refuge in the living rooms and cooking-places, and a herd of cows is usually accommodated under a lean-to shed in the back-yard. Reconstruction and improvements in sanitation are now, however, being undertaken.

The population of Moulmein was 46,472 in 1872; 53,107 in 1881; 55,785 in 1891; and 58,446 in 1901. The last figure includes 8,544 Musalmāns and 19,081 Hindus, the increase of population in the last decade being almost entirely due to Hindu immigration from Madras. The chief native industries pursued are gold- and silver-work and ivory-carving; but Moulmein also contains 14 steam saw-mills, 3 rice-mills, and 4 mills in which both sawing and milling are carried on, besides a steam joinery (also dealing with rice), and a foundry.

The port of Moulmein has an interesting history. Between the years 1830 and 1858 ship-building was carried on to a considerable extent, ample supplies of teak being drawn from the rich forests in the surrounding country. The advent of the iron ship and the steamer has destroyed the larger branch of this industry, which is now confined to the construction of small country craft. Of late a great obstruction to

the prosperity of the oversea trade of Moulmein has been the presence of bars in the channel of the Salween near its mouth, but Government has lately taken steps to keep the lower reaches of the river open to steamers of deep draught by means of a powerful dredger. The growth in the trade of the port appears from the following figures. The imports in 1880–1 were valued at 98 lakhs, in 1890–1 at 99 lakhs, in 1900–1 at 1·2 crores, and in 1903–4 at 1·5 crores; while the exports were valued in 1880–1 at 1·48 crores, in 1890–1 at 1·28 crores, in 1900–1 at 1·8 crores, and in 1903–4 at 2 crores. Of the imports, only about one-tenth come direct from foreign (extra-Indian) ports, the greater part being received, more or less equally, from Calcutta and Rangoon. From foreign ports the chief imports (mainly from the Straits) are betel-nuts, sugar, and provisions of various kinds. The imports from Bengal consist mainly of specie in payment for rice and other exports, and those from Rangoon of re-exported foreign goods. The exports, on the other hand, go mainly to foreign ports, this portion being valued in 1903–4 at 1·35 crores, of which by far the greater part was partially husked rice (valued at 1 crore), teak and rice-bran being the next most important commodities. About half the rice is shipped to Suez, where it is to a large extent reconsigned to European ports. The exports from Moulmein to the Straits for Farther Asian ports were valued in 1903–4 at 36 lakhs, and those to England at 22¾ lakhs, while those to Indian ports were valued in the same year at 68 lakhs, of which 21 lakhs went to Calcutta, 18 to other Burmese ports, and 24 to Bombay. The British India Steam Navigation Company runs three fast steamers a week between Moulmein and Rangoon, as well as a boat between Moulmein and the other ports on the Tenasserim coast. The inland waters are served by the steamers of the Irrawaddy Flotilla Company.

The port of Moulmein is in charge of a Port Officer, belonging to the Royal Indian Marine, and is buoyed and lighted by the Port fund, which had an income and expenditure of 1·56 lakhs and 1·79 lakhs respectively, in 1903–4. The Port and Customs offices are near the main wharf, close to the river's edge. Up to 1874 the town was under the control of a town magistrate, the funds required for administration being provided by a night-watch tax and Government contributions and from a few local sources. In 1874 a municipal committee was formed, and the income and expenditure during the decade ending 1901 averaged Rs. 1,42,800. In 1903–4 the former amounted to 7·2 lakhs (including a loan of 3·96 lakhs). The principal sources of revenue were house and land tax (Rs. 72,600), and water rate (Rs. 90,000). The expenditure in the same year was 6·4 lakhs. The chief heads of outlay were Rs. 42,000 spent on conservancy, Rs. 43,000 on roads, Rs. 44,000 on lighting, and Rs. 59,000 on public works. The water-supply, constructed at a cost of 9½ lakhs, has recently been

completed. The water is impounded in a reservoir 4 miles to the south of Moulmein, at the foot of the Taungwaing hills, and is distributed through each division of the town by gravitation. It is hoped that the provision of a supply of good drinking-water will put a stop to the cholera epidemics that have visited Moulmein regularly in the past. A sum of nearly 3 lakhs is to be expended on surface drainage, of which the town is badly in need. Since 1898 the town has been lit by oil gas. The gas-works are a municipal concern, the plant being capable of generating 12,500 cubic feet of gas daily. The municipality makes no contribution to education, but maintains a hospital with 100 beds. Other public institutions are the leper asylum (where 29 in-patients and 23 out-patients were treated in 1903), and numerous schools. There is a branch of the Bank of Bengal in Moulmein, and two newspapers are published, one in English and one in Burmese.

Moulmeingyun.—Township of Myaungmya District, Lower Burma, lying between 15° 45′ and 16° 34′ N. and 95° and 95° 35′ E., with an area of 561 square miles. It is really a large island, bounded on the east by the Irrawaddy and on the west by the Kyunpyatthat and Pyamalaw rivers, and cut up by numerous creeks. The northern portion is somewhat densely populated, but the southern is mostly jungle-covered, though cultivation is rapidly extending. The township was constituted in 1903, out of a portion of the old Wakema township and an area transferred from the former Thongwa District at the time that the District of Pyapon was created. The population of the township as now constituted was 97,931 in 1901, distributed in 129 villages, Moulmeingyun (population, 1,782), on one of the numerous branches of the Irrawaddy, being the head-quarters. In 1903–4 the area under cultivation was 273 square miles, paying Rs. 2,85,000 land revenue.

Mount Victoria.—Highest point in the Natmadaung range in the Pakokku Chin Hills, Burma, situated in 21° 16′ N. and 93° 57′ E., close to the eastern edge of the hills of Northern Arakan, and about 76 miles due west of the Irrawaddy, opposite the town of Pakokku, 10,400 feet above the sea. Of recent years Mount Victoria has been found to possess possibilities as a sanitarium, the construction of Government buildings has commenced, and in 1902 the head-quarters of the Assistant Superintendent of the Pakokku Chin Hills were removed from Mindat Sakan to Kanpetlet on the mount.

Mowa.—Petty State in KĀTHIĀWĀR, Bombay.

Mowār.—Town in the Kātol *tahsīl* of Nāgpur District, Central Provinces, situated in 21° 28′ N. and 78° 27′ E., on the Wardhā river bordering Berār, 53 miles north-west of Nāgpur city. Population (1901), 4,799. Mowār was created a municipality in 1867. The municipal receipts during the decade ending 1901 averaged Rs. 3,600.

In 1903-4 they were Rs. 4,000, the chief source of income being market dues. It has a small dyeing industry, but with this exception the population is solely agricultural. The town is surrounded by groves and gardens on all sides except towards the river. A large weekly market is held. There is a vernacular middle school.

Mozufferpore.—District, subdivision, and town in Bengal. *See* MUZAFFARPUR.

Mrohaung.—Township and village in Akyab District, Lower Burma. *See* MYOHAUNG.

Mubārakpur.—Town in the Muhammadābād *tahsīl* of Azamgarh District, United Provinces, situated in 26° 6′ N. and 83° 18′ E., 8 miles north-east of Azamgarh town. Population (1901), 15,433. It is said to have been formerly called Kāsimābād, and to have fallen into decay before it was resettled, under the name of Rājī *Mubārak*, by an ancestor of the present Shaikh landholders, some twelve generations ago. Serious conflicts have occurred between the Muhammadan and Hindu inhabitants of the town, especially in 1813, 1842, and 1904, and special police are at present quartered here. Mubārakpur is administered under Act XX of 1856, with an income of about Rs. 2,000. It contains about 1,700 looms on which cotton, silk, and satin stuffs are woven, the town being especially noted for the last. There is also a small industry in sugar-refining. A primary school is attended by 60 pupils.

Mūdbidri.—Village in the Mangalore *tāluk* of South Kanara District, Madras, situated in 13° 5′ N. and 75° E., 21 miles [illegible] of Mangalore town. It was once an important Jain town; the descendant of the old Jain chief, known as 'the Chouter,' still lives here and draws a small pension. It contains eighteen Jain *bastis* or temples, one of which, the Chandranāth temple, is the finest building of the kind in the District. It has about 1,000 pillars, all of them most beautifully and richly carved. The architecture of these temples is peculiar, and Fergusson states that the nearest approach to the type is to be found in Nepāl. By the sloping roofs of their verandas and the exuberance of their carving, they show that their architecture is copied from constructions in wood. Close by are some tombs of Jain priests, built in several storeys, but of no great size and now much decayed. There is also an old stone bridge, which is interesting as showing the ancient Hindu methods of constructing such works.

Muddebihāl Tāluka.—Eastern *tāluka* of Bijāpur District, Bombay, lying between 16° 10′ and 16° 37′ N. and 75° 58′ and 76° 25′ E., with an area of 569 square miles. It contains one town, TĀLIKOT (popula[illegible] tion, 6,610); and 150 villages, including MUDDEBIHĀL (6,2[illegible]), the head-quarters. The population in 1901 was 69,842, compared with 81,572 in 1891. The density, 123 persons per square mile, is

slightly below the District average. The demand for land revenue in 1903-4 was 1·53 lakhs, and for cesses Rs. 13,000. In the north of the *tāluka* is the rich valley of the Don. The central plateau of sandstone and limestone is fairly fertile. The south and south-east is a barren tract of metamorphic granite, fertile only close to the Kistna. The annual rainfall averages about 27 inches.

Muddebihāl Village.—Village in the *tāluka* of the same name in Bijāpur District, Bombay, situated in 16° 20′ N. and 76° 8′ E., about 18 miles from Alimatti station on the Southern Mahratta Railway. Population (1901), 6,235. The village comprises the site of Parvatgiri to the east and of Muddebihāl to the west, separated by a large drain running north and south. It was founded about 1680 by Parmanna, an ancestor of the present Nādgaunda of Basarkot, and the fort was built by his son Huchappa about 1720. About 1764 it came under the Peshwās, and it was included in British territory in 1818. The village contains a Subordinate Judge's court, a dispensary, two boys' schools with 329 pupils, and a girls' school with 56.

Mudgal.—Head-quarters of the Lingsugūr *tāluk*, Raichūr District, Hyderābād State, situated in 16° 1′ N. and 76° 26′ E. Population (1901), 7,729, of whom 4,753 are Hindus, 2,593 Musalmāns, and 380 Christians. The fort was the seat of the Yādava governors of Deogiri in 1250. It came successively into the possession of the Rājās of Warangal, the Bahmani and the Bijāpur Sultāns, and lastly it fell to Aurangzeb. There is a small Roman Catholic colony in the town, whose ancestors were originally converted by one of St. Francis Xavier's missionaries from Goa. The church was built at an early date and contains a picture of the Madonna. Mudgal has two schools, one of which is supported by the mission, a post office, and an *Ashūr-khāna*, where the Muharram ceremony is held with great *éclat* in the presence of thousands of pilgrims.

Mudgere Tāluk.—Southern *tāluk* of Kadūr District, Mysore, lying between 12° 55′ and 13° 19′ N. and 75° 10′ and 75° 45′ E., with an area of 435 square miles. The population in 1901 was 46,212, compared with 45,[illegible] in 1891. The *tāluk* contains one town, Mudgere (population, 2,075), the head-quarters; and 137 villages. The land revenue demand in 1903-4 was Rs. 1,23,000. Till 1876 Mudgere formed part of Manjarābād. Like that *tāluk*, it lies in the Malnād, and is highly picturesque. The Western Ghāts bound it on the west, towering up to the great peak of Kudremukh (6,215 feet). The Bhadra flows across the north, and the Hemāvati through the south. The summits of the mountains are bare, but the hanging woods on their sides impart great beauty to the landscape. The annual rainfall averages 103 inches. The chief products are coffee, areca-nuts, cardamoms, rice, and a little sugar-cane. The rice crop mainly depends on springs in the hills from

which watercourses are led. Many of the coffee estates are under European management, the labourers being Tulus from South Kanara. The Bŭnd (or coffee) *ghāt* road runs from Mudgere west, down to Mangalore on the coast.

Mudhol State.—State under the Political Agent of Kolhāpur and the Southern Marāthā Country, Bombay, lying between 16° 7′ and 16° 27′ N. and 75° 4′ and 75° 32′ E., with an area of 368 square miles. It is bounded on the north by Jamkhandi State; on the east by the Bāgalkot *tāluka*; on the south by Belgaum and Bijāpur Districts and the Kolhāpur State; and on the west by the Gokāk *tāluka* of Belgaum District. The population in 1901 was 63,001, Hindus numbering 57,896, Muhammadans 4,826, and Jains 277. The State contains 3 towns, including MUDHOL (population, 8,359), the residence of the chief; and 81 villages. The general aspect of the country is flat, with slight undulations. The scenery is monotonous, and, except during the rainy season, presents a parched and barren aspect. There are no mountains, the small hill ranges not being more than 150 feet high. The greater portion of the soil is black, the remainder being the inferior description of red and stony land known as *māl*. The only river passing through the State is the Ghātprabha, which is navigable during the monsoon by boats of less than a ton burden; but it is never used as a means of communication for travelling or trade. It waters in its course about half the villages of the State, and irrigates by its annual floods a considerable area. Irrigation is also effected by damming up small rivulets, and turning off the water in the direction required; by drawing water from wells and pools by means of leathern bags; and where the elevation of the bed of a reservoir is sufficient, by leading channels into the neighbouring fields. As in other parts of the Deccan, the climate is very dry, the heat from March to May being oppressive. The staple crops are *jowār*, wheat, gram, and cotton. Cotton cloth and articles of female apparel are the chief manufactures.

The chief of Mudhol belongs to the Bhonsla family of the Marāthā caste or clan, descended, according to tradition, from a common ancestor with Sivajī the Great. This name, however, has been entirely superseded by the second designation of Ghorpade, which is said to have been acquired by one of the family who managed to scale a fort, previously deemed impregnable, by fastening a cord around the body of a *ghorpad* or iguana. All that is authentically known of the history of the family is that it held a high position at the court of Bijāpur, from which it received the lands it still holds. The Mudhol chiefs were the most determined opponents of Sivajī during his early conquests; but on the overthrow of the Muhammadan power they joined the Marāthās, and accepted a military command from the Peshwā.

The great-grandfather of the present ruler (who died in 1856) was the first who became a feudatory of the British Government.

The chief administers his estate in person. He enjoys an estimated revenue of more than 3 lakhs, and pays a tribute of Rs. 2,672 to the British Government. He officially ranks as a first-class Sardār in the Southern Marāthā Country. There are two civil courts in the State. An appeal lies to the chief, who has power to try his own subjects for capital offences. The family of the chief holds a title authorizing adoption, and follows the rule of primogeniture in matters of succession. There are 24 schools with 1,123 pupils; and three municipalities, with an income in 1903-4 of Rs. 6,400. The police force numbered 104 in the same year, and the one jail in the State contained a daily average of 17 prisoners. In 1903-4 the State maintained three dispensaries which afforded relief to 26,000 persons, and 1,300 persons were vaccinated.

Mudhol Town (1).—Chief town of the State of Mudhol, Bombay, situated in 16° 20′ N. and 75° 19′ E., on the left bank of the Ghātprabha, about 12 miles south of Jamkhandi. Population (1901), 8,359. It is administered as a municipality, with an income in 1903-4 of Rs. 2,700. The town contains a dispensary.

Mudhol Tāluk.—*Tāluk* in Nānder District, Hyderābād State, with an area of 335 square miles. In 1901 the population, including *jāgīrs*, was 57,024, compared with 64,124 in 1891, the decrease being due to the famine of 1900. Till recently it had 115 villages, of which 25 are *jāgīr*, and one town, MUDHOL (population, 6,040), the head-quarters. The land revenue in 1901 was 1·7 lakhs. Up to 1905 the *tāluk* formed part of Indūr (Nizāmābād) District; and on its transfer to Nander District it was enlarged by the addition of the Bhaisa *tāluk* and part of Nānder. The soil is mostly black cotton.

Mudhol Town (2).—Head-quarters of the *tāluk* of the same name in Nānder District, Hyderābād State, situated in 18° 59′ N. and 77° 55′ E., 28 miles north-west-by-north of Nizāmābād. Population (1901), 6,040. Besides the *tahsil* office, the town contains a post office, a police inspector's office, and a school with 120 pupils.

Mudkī.—Town in the District and *tahsīl* of Ferozepore, Punjab, situated in 30° 47′ N. and 74° 55′ E., on the road between Ferozepore and Ludhiāna. Population (1901), 2,977. It is memorable for the battle which inaugurated the first Sikh War, fought on December 18, 1845, on the plain 26 miles south of the Sutlej. Two days before this battle, the Sikhs had crossed the boundary river at Ferozepore. They were met by a much smaller British force at Mudkī, and driven from their position, with the loss of 17 guns, after a hard contest, in which the British lost a large proportion of officers. Monuments have been erected on the battle-field in honour of those who fell.

Mudon.—Sea-board township of Amherst District, Lower Burma (formerly known as Zaya), stretching down the coast opposite the island of Bilugyun, from the Taungnyo hills to the sea, between 15° 58′ and 16° 27′ N. and 97° 36′ and 97° 55′ E., with an area of 236 square miles. It is flat, fertile, and thickly populated. The population, which is largely Talaing, increased from 40,761 in 1891 to 52,746 in 1901, distributed in 106 villages, Mudon (population, 2,358), a village on the Moulmein-Amherst road, 9 miles south of Moulmein, being the head-quarters. The area cultivated in 1903–4 was 144 square miles, paying Rs. 2,12,600 land revenue.

Mudukulattūr.—*Zamīndāri tahsīl* in the Rāmnād subdivision and estate, Madura District, Madras. It is named after its head-quarters, where a deputy-*tahsīldār* and sub-magistrate is stationed. The population in 1901 was 146,255, compared with 135,182 in 1891. It contains two towns, ABIRĀMAM (population, 7,338) and KAMUDI (6,854); and 399 villages. The *tahsīl* possesses the same desolate and uninviting appearance as the rest of the Rāmnād estate. It is largely black cotton soil, and during the rains, owing to the absence of roads, the country becomes nearly impassable.

Muhamdī Tahsīl.—South-western *tahsīl* of Kherī District, United Provinces, comprising the *parganas* of Muhamdī, Pasgawān, Atwā Piparīā, Aurangābād, Magdāpur, Haidarābād, and Kastā (Abgawān), and lying between 27° 41′ and 28° 10′ N. and 80° 2′ and 80° 39′ E., with an area of 651 square miles. Population fell from 258,617 in 1891 to 257,989 in 1901, this being the only *tahsīl* in the District where a decrease took place. There are 607 villages and one town, MUHAMDĪ (population, 6,278), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 296,000, and for cesses Rs. 49,000. The density of population, 396 persons per square mile, is the highest in the District. The *tahsīl* is bounded on the west by the Sukhetā, and is also drained by the Gumtī, Kathnā, and Sarāyān. A great part is composed of fertile loam; but the large area between the Kathnā and Gumtī, called the Parehār, is a dry sandy tract where irrigation is generally impossible. In 1903–4 the area under cultivation was 406 square miles, of which 99 were irrigated. Wells supply more than two-thirds of the irrigated area, and tanks or *jhīls* most of the remainder.

Muhamdī Town.—Head-quarters of the *tahsīl* of the same name in Kherī District, United Provinces, situated in 27° 58′ N. and 80° 14′ E., near the Gumtī. Population (1901), 6,278. The town became of some importance during the seventeenth century, when it was held by Muktadī Khān, a descendant of Sadr Jahān, the great noble of Akbar's court. He built a large brick fort, the ruins of which still remain. Early in the eighteenth century the celebrated Hakīm Mahdī Alī

Khān, afterwards minister to the kings of Oudh, resided here while governor of Muhamdī and Khairābād, and made several improvements. At annexation in 1856 Muhamdī was selected as the head-quarters of a District, but after the Mutiny Lakhīmpur became the capital. Besides the usual offices, there are a branch of the American Methodist Mission and a dispensary. The town was administered as a municipality from 1879 to 1904, when it was declared to be a 'notified area.' During the ten years ending 1901 the income and expenditure averaged Rs. 2,800. In 1903-4 the income was Rs. 7,000, including a grant of Rs. 3,500 from Provincial revenues; and the expenditure was Rs. 6,500. Though Muhamdī is of less importance than formerly, a considerable trade is still carried on, and the town contains six sugar refineries. There is a school with 140 pupils.

Muhammadābād Tahsīl (1).—South-eastern *tahsīl* of Azamgarh District, United Provinces, comprising the *parganas* of Karyāt Mittū, Chiriākot, Maunāth Bhanjan or Mau, and Muhammadābād, and lying between 25° 48′ and 26° 8′ N. and 83° 11′ and 83° 40′ E., with an area of 427 square miles. This area was reduced by 71 miles in 1904, portions being transferred to the new Ghosī *tahsīl*. Population fell from 359,746 in 1891 to 306,870 in 1901, and allowing for the recent change is now 251,796. There are 971 villages and three towns: Mau (population, 17,696), Mubārakpur (15,433), and Muhammadābād (8,775), the *tahsīl* head-quarters. The demand for land revenue in 1903-4 was Rs. 3,63,000, and for cesses Rs. 59,000; but after the transfer these figures became Rs. 3,02,000 and Rs. 49,000. The density of population of the reconstituted *tahsīl* is 707 persons per square mile, or almost exactly the District average. The *tahsīl* is intersected by several small streams and a number of swamps and marshes, and lies south of the Chhotī Sarjū and its tributary, the Tons. In 1900-1, 238 square miles of the old area were under cultivation, of which 146 were irrigated. Wells supply rather more than half the irrigated area, and tanks or swamps and small rivers the remainder in equal proportions.

Muhammadābād Town (1).—Head-quarters of the *tahsīl* of the same name in Azamgarh District, United Provinces, situated in 26° 2′ N. and 83° 24′ E., on the Tons and on the Bengal and North-Western Railway. Population (1901), 8,775. The town appears to be of some antiquity, and was held by Muhammadans from the early part of the fifteenth century. It contains a dispensary, a *tahsīlī*, a *munsifī*, and a police station. It is administered under Act XX of 1856, with an income of about Rs. 1,400. There are about 300 looms and a few sugar refineries. Two schools have 100 pupils.

Muhammadābād Tahsīl (2).—Eastern *tahsīl* of Ghāzīpur District, United Provinces, comprising the *parganas* of Zahūrābād, Muhammad

ābād, and Dehma, and lying north of the Ganges, between 25° 31′ and 25° 54′ N. and 83° 36′ and 83° 58′ E., with an area of 320 square miles. Population fell from 251,823 in 1891 to 226,760 in 1901. There are 694 villages and two towns, including MUHAMMADĀBĀD (population, 7,270), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 2,41,000, and for cesses Rs. 45,000. The density of population, 709 persons per square mile, is the highest in the District. Through the centre of the *tahsīl* flows the Mangai, and the Chhotī Sarjū crosses the north. Rice and sugar-cane are largely grown in the northern portion, where *jhīls* and tanks abound, while spring crops are the staple in the south, which includes a large area of alluvial soil and forms one of the most fertile tracts in the District. The area under cultivation in 1903–4 was 234 square miles, of which 82 were irrigated. Wells supply about eight-ninths of the irrigated area, and tanks most of the remainder.

Muhammadābād Town (2).—Head-quarters of the *tahsīl* of the same name in Ghāzīpur District, United Provinces, situated in 25° 37′ N. and 83° 47′ E., on the Bengal and North-Western Railway and close to the road from Ghāzīpur town to Buxar. Population (1901), 7,270. The town is administered under Act XX of 1856, with an income of about Rs. 1,500. It contains one tolerably straight thoroughfare, lined with well-built shops and houses, and wears a neat and clean appearance. A weekly bazar is held, and a flourishing export trade in grain is springing up. Besides the ordinary public offices, there are a dispensary, a *munsifī*, and two schools with 184 pupils.

Muhammadgarh.—Mediatized State in Central India, under the Bhopāl Agency, situated on the Mālwā plateau, with an area of about 29 square miles, and a population (1901) of 2,944. The State was originally included in Bāsoda and Korwai. In 1753 Ahsān-ullah Khān, the Nawāb of Bāsoda, divided his State between his two sons, Bakā-ullah and Muhammad Khān, the latter founding the town and State of Muhammadgarh. The present chief is Hātim Kulī Khān, who succeeded in 1896, and bears the title of Nawāb. The State contains 14 villages, and produces good crops of all the ordinary grains and of poppy. About 8 square miles, or 27 per cent. of the total area, are cultivated, of which 51 acres are irrigated. The chief exercises the criminal powers of a first-class magistrate, all serious crimes being dealt with by the Political Agent. The revenue amounts to Rs. 7,000. The town of Muhammadgarh is situated in 23° 39′ N. and 78° 10′ E., and has a population (1901) of 856. It is reached from the Bhilsa station of the Midland section of the Great Indian Peninsula Railway, 29 miles distant, by a fair-weather road.

Muhammad Khān's Tando.—Head-quarters of the Guni *tāluka* of Hyderābād District, Sind, Bombay. *See* TANDO MUHAMMAD KHĀN.

Muhammadot.—An estate in Ferozepore District, Punjab. *See* MAMDOT.

Muhammadpur.—Village in the Māgura subdivision of Jessore District, Bengal, situated in 23° 24′ N. and 89° 37′ E., on the right bank of the Madhumatī. Population (1901), 44. Muhammadpur was formerly a large town; and a quadrangular fort, many fine tombs, and other remains bear testimony to its ancient greatness. The place is now very unhealthy, and it was in its neighbourhood that the virulent epidemic known as 'Burdwān fever' was first noticed about 1840.

Muhpā.—Town in Nāgpur District, Central Provinces. *See* MOHPĀ.

Mukāmā.—Town in Patna District, Bengal. *See* MOKAMEH.

Mukandwāra (or Mukandara).—Village in the Chechat *tahsīl* of the State of Kotah, Rājputāna, situated in 24° 49′ N. and 76° E., in the hills of the same name, about 32 miles south-by-south-east of Kotah city and about 80 north-east of Nīmach. The range is here pierced by a pass, about 1,500 feet above the sea, which is of great importance as being the only defile practicable for wheeled traffic for a considerable distance between the Chambal and Kālī Sindh rivers. This pass is called Mukandwāra, 'the gate or portal of Mukand,' after Mukand Singh, who was the second chief of Kotah, and built the gates of the defile as well as a palace to his favourite mistress, Ablī Mīnī, on the slope of the hill. The pass has been the scene of many obstinately contested battles between the Khīchī and the Hāra Rājputs, and is famous as the route of Colonel Monson's retreat before Jaswant Rao Holkar in July, 1804. Some distance up the valley are the fragments of the *chaorī* or hall of Bhīm. Fergusson thought the building might be as old as A.D. 450, or even older, but only the columnar part of the *mandap* or portico remained and no inscription could be found. The lintels and consoles are elaborately carved all over with strange animal forms and floral scrolls; and the pillars, though scarcely ten feet in height, look larger and nobler than many of twice their dimensions.

[J. Tod, *Rajasthan*, vol. ii; J. Fergusson, *Picturesque Illustrations of Ancient Architecture* and *History of Indian and Eastern Architecture*; also, *Archaeological Survey of Northern India*, vol. xxiii.]

Mukeriān.—Town in the Dasūya *tahsīl* of Hoshiārpur District, Punjab, situated in 31° 57′ N. and 75° 38′ E. Population (1901), 3,589. It was a stronghold of Sardār Jai Singh Kanhaya, whose power was paramount in the Punjab about 1774–84; and Ranjīt Singh's reputed son, Sher Singh, who afterwards became Mahārājā, was born here. The town has no trade of any importance. The municipality was created in 1867. The income and expenditure during the ten years ending 1902–3 averaged Rs. 3,100. In 1903–4 the income was Rs. 3,200, chiefly derived from octroi; and the expenditure was

Rs. 2,900. It maintains a vernacular middle school and a Government dispensary.

Mukhalingam.—Village in the Parlākimedi *tahsīl* of Ganjām District, Madras, situated in 18° 35′ N. and 38° 59′ E., on the left bank of the Vamsadhāra, 18 miles from Parlākimedi. It is famous for its Siva temple, which is held in great veneration, and is maintained by the Rājā of Parlākimedi. A religious festival and fair is held annually on the Sivarātri, when thousands of pilgrims visit it. This and two other temples in the same village are excellent examples of the Orissan or Indo-Aryan style of architecture, which differs widely from the Dravidian style of the southern Districts; and the sculpture on them is remarkable for its elegance and precision. One of them was built at the beginning of the ninth century, and the inscriptions show that Mukhalingam was formerly inhabited by Buddhists, and that it and not Calingapatam or Chicacole, as was once supposed, was the site of the capital of the old Ganga kings of Kalinga.

Mukher.—Head-quarters of the Kandahār *tāluk*, Nānder District, Hyderābād State, situated in 18° 42′ N. and 77° 22′ E. Population (1901), 6,148. It is a centre of the cotton trade and contains a ginning factory, while brass and copper vessels are largely manufactured. Besides the *tahsīl* office, it contains a Munsif's court, a police inspector's office, a dispensary, a post office, a school, and an old Hindu temple.

Muktāgācha.—Town in the head-quarters subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 46′ N. and 90° 15′ E., on the road from Nasīrābād to Subarnakhāli. Population (1901), 5,888. Though the town was constituted a municipality in 1875, the population is poor and rural. The income during the decade ending 1901–2 averaged Rs. 6,500, and the expenditure Rs. 6,000. In 1903–4 the income was Rs. 8,000, of which Rs. 4,500 was obtained from a property tax; and the expenditure was Rs. 7,000.

Muktesar.—*Tahsīl* and town in Ferozepore District, Punjab. *See* MUKTSAR.

Mukteswar (*Motesar*).—Village in Nainī Tāl District, United Provinces, situated in 29° 28′ N. and 79° 39′ E., on the Himālayas, at an elevation of 7,500 to 7,700 feet. Up to 1893 the village was distinguished only by its shrines and a small temple. It was then selected as the site of a laboratory for the manufacture of serum to protect cattle against rinderpest. The laboratory was completed in 1898, but was burnt down in 1899 and rebuilt by 1901. It stands in an enclosure of about 3,000 acres, part of which is occupied by oak and pine forest; a fruit garden started many years ago has also been included, and a meteorological observatory is maintained. In addition to the supply of serum for use in epidemics of rinderpest, a serum for anthrax, and

also mallein, tuberculin, and tetanus anti-toxin are prepared. Researches are being conducted in the etiology of diseases affecting animals, such as rinderpest, anthrax, surra, lymphangitis epizootica, and glanders; and District board veterinary assistants from the United Provinces and the Punjab are instructed in the use of various kinds of sera. The annual expenditure is about Rs. 50,000.

Muktsar Tahsīl (*Muktesar*).—*Tahsīl* of Ferozepore District, Punjab, lying between 30° 9′ and 30° 54′ N. and 74° 4′ and 74° 52′ E., with an area of 935 square miles. It is bounded on the north-west by the Sutlej, which divides it from Montgomery and Lahore Districts; on the east by Farīdkot; and on the south-east by Patiāla. On the west is a belt of alluvial land along the left bank of the Sutlej, irrigated by the Grey Canals. The middle portion of the *tahsīl* is a level plain with a firm soil, while north and south the country is sandy. The central and southern portions are irrigated by the Sirhind Canal. The population in 1901 was 172,445, compared with 161,492 in 1891. The head-quarters are at the town of MUKTSAR (population, 6,389). The *tahsīl* also contains 320 villages. The land revenue and cesses in 1903-4 amounted to 2·7 lakhs.

Muktsar Town (*Muktesar*).—Head-quarters of the *tahsīl* of the same name in Ferozepore District, Punjab, situated in 30° 28′ N. and 74° 31′ E., on the Fāzilka extension of the Rājputāna-Mālwā Railway. Population (1901), 6,389. Muktsar is the largest town and principal trade mart in the west of Ferozepore District. Apart from its commercial importance, the town is chiefly noticeable for a great Sikh festival, which takes place in January. It lasts for three days, and commemorates a battle fought in 1705-6 by Gurū Govind Singh against the pursuing imperial forces. There is a large tank in which pilgrims bathe, begun by the Mahārājā Ranjīt Singh, and continued and completed by the chiefs of Patiāla, Jīnd, Nābha, and Farīdkot. The municipality was created in 1867. The income during the ten years ending 1902-3 averaged Rs. 6,100, and the expenditure Rs. 4,900. In 1903-4 the income was Rs. 6,800, chiefly from octroi; and the expenditure was Rs. 6,200. There is a Government dispensary.

Mukurti.—Peak in the Nīlgiri District, Madras. *See* MAKURTI.

Mūla.—River in Baluchistān, rising in the Harboi hills and having a total length of 180 miles. As far as Kotra in Kachhi (28° 22′ N., 67° [illegible] E.), it passes with a rapid fall through the Central Brāhui range; in its lower reaches many flats lie along its course. The upper course is known as the Soinda; a little lower it is called the Mishkbel, and from Pāshthakhān downwards it becomes the Mūla. Its principal affluents are the Malghawe, the Anjīra or Pissibel, and the Ledav. The Mūla drains the whole of the north-east of the Jhalawān country and also the south-west corner of Kachhi. Wherever possible, the small

perennial supply of water is drawn off to irrigate the flats along the course of the river, while flood-water is utilized for cultivation in Kachhi. The Mūla Pass route to the Jhalawān country lies along its course.

Mulbāgal Tāluk.—Eastern *tāluk* of Kolār District, Mysore, lying between 13° 1′ and 13° 22′ N. and 78° 14′ and 78° 36′ E., with an area of 327 square miles. The population in 1901 was 66,899, compared with 56,269 in 1891. The *tāluk* contains one town, MULBĀGAL (population, 6,562), the head-quarters; and 351 villages. The land revenue demand in 1903–4 was Rs. 1,60,000. The Pālār river runs along the southern half of the west border, and the streams flow to this below the Ghāts. A range of hills runs north from Mulbāgal, and over the *tāluk* generally gneissic rocks and boulders crop up everywhere. The west is open rolling country, the east broken and steep. Tanks and wells are numerous, with water close to the surface. The 'dry-crop' soil is poor, grey, and sandy. The 'wet' lands contain much sand and clay, often with efflorescences of potash. The best cultivation is towards the north-east.

Mulbāgal Town.—Head-quarters of the *tāluk* of the same name in Kolār District, Mysore, situated in 13° 10′ N. and 78° 24′ E., 18 miles east of Kolār town. Population (1901), 6,562. The name, originally Muluvāyi, is Mulu-bāgal, in Sanskrit Kantakadvāra, 'thorn-gate.' There is a Srīpādarāya *math* of the Mādhva sect here, and the tomb of a saint named Haidar Walī attracts many Musalmāns to the celebration of his anniversary. Pilgrims to Tirupati from the west shave their heads and bathe in the Narasimha-tīrtha as a preliminary purification. Mulbāgal sugar and Mulbāgal rice are considered the best in the District. The former is prepared by Muhammadans employed by Brāhmans. Under Vijayanagar rule the town was at first the seat of government for the Kolār territory, and afterwards belonged to the Sugatūr family. It was taken by the British in 1768 and 1791, but restored to Mysore at the peace of 1792. The municipality dates from 1870. The receipts and expenditure during the ten years ending 1901 averaged Rs. 3,100. In 1903–4 they were Rs. 4,000 and Rs. 3,600.

Mulgund.—Town in the Gadag *tāluka* of Dhārwār District, Bombay, situated in 15° 16′ N. and 75° 31′ E., 12 miles south-west of Gadag town. Population (1901), 7,523. Till 1848, when through failure of heirs it lapsed to the British Government, Mulgund belonged to the chief of Tāsgaon. There are five Brāhmanic and four Jain temples in the town. It contains four schools, including one for girls.

Muli State.—State in the Kāthiāwār Political Agency, Bombay, lying between 22° 38′ and 22° 46′ N. and 71° 25′ and 71° 38′ E., with an area of 133 square miles. The population in 1901 was 15,136, residing in 20 villages. The revenue in 1903–4 was Rs. 79,773, and

[illegible] square miles were cultivated. The State ranks as a fourth-class State in Kāthiāwār, and is the only Ponwār chiefship. The Ponwārs entered the peninsula about 1470–5 from Thar and Pārkar, under the leadership of Laghhdirjī, and established themselves at Thān and Chotila. They founded the present town of Muli, named after a Rabāri woman. After three generations the Kāthīs crossed over to Thān, and shortly after expelled the Ponwārs from Chotila. Since then the Kāthīs have held Chotila, and the Ponwārs' holding has been limited to Muli and the adjacent villages.

Muli Town.—Chief town of the State of the same name in Kāthiāwār, Bombay, situated in 22° 38′ N. and 71° 30′ E., 13 miles south-west of Wadhwān on the Bhogāva. Population (1901), 5,455. It is famous for its saddle-cloths. Muli contains a temple of the Swāmi Nārāyan sect, founded by the Ponwārs and named after a Rabāri woman. There is also a temple of the Sun, which is worshipped here under the name of Māndav Rai.

Mulila Deri.—Petty State in KĀTHIĀWĀR, Bombay.

Mulji-nā-pura.—Petty State in MAHĪ KĀNTHA, Bombay.

Multai.—Eastern *tahsīl* of Betūl District, Central Provinces, lying between 21° 25′ and 22° 23′ N. and 77° 57′ and 78° 34′ E., with an area of 1,056 square miles. The population in 1901 was 114,369, compared with 128,477 in 1891. The density is 108 persons per square mile. The *tahsīl* contains 417 inhabited villages. Its head-quarters are at Multai, a village of 3,505 inhabitants, 28 miles from Badnūr on the Nāgpur road and 87 miles from Nāgpur. The village stands on an elevated plateau 2,600 feet high, and contains a sacred tank which is considered to be the source of the river Tāpti. The real source of the river is, however, two miles distant. Excluding 364 square miles of Government forest, 75 per cent. of the available area is occupied for cultivation. The cultivated area in 1903–4 was 557 square miles. The demand for land revenue in the same year was Rs. 1,16,000, and for cesses Rs. 13,000. The *tahsīl* consists mainly of poor rolling upland with rich patches of fertile soil in the valleys, and is bordered by [illegible] hills to the north and south.

Multān Division.—South-western Division of the Punjab, forming a wedge between the North-West Frontier Province and the State of Bahāwalpur. It lies between 28° 25′ and 33° 13′ N. and 69° 10′ and 73° 39′ E. The Sutlej divides it from Bahāwalpur on the south-east, while the Indus flows partly through the Division and partly along its border to the west. The head-quarters of the Commissioner are at Multān or, in the hot season, at Fort Munro. The Division was abolished in 1884, but reconstituted in 1901. In 1881 the population of the area now included was 2,036,956, in 1891 it [illegible] to 2,277,605, and in 1901 to 3,014,675. The total area is

29,520 square miles, and the density of the population was the lowest in the Province, 102 persons per square mile, compared with the Provincial average of 209. The Multān Division is considerably larger in area, but its population is considerably less than that of any other Division in the Punjab. In 1901 Muhammadans numbered 2,391,281, or 79 per cent. of the total; Hindus, 536,052; Sikhs, 79,269; Jains, 334; and Christians, 7,686.

The Division includes five Districts, as shown below:—

District.	Area in square miles.	Population, 1901.	Land revenue and cesses, 1903-4, in thousands of rupees.
Miānwāli	7,816	424,588	5,67
Jhāng*	6,652	1,002,656	27,13
Multān	6,107	710,626	17,51
Muzaffargarh	3,635	405,656	8,46
Dera Ghāzi Khān	5,306	471,149	6,41
Total	29,516	3,014,675	65,18

* In 1904 part of Jhang District was separated, to form the new District of LYALLPUR.

The Division contains 5,085 villages and 23 towns, the largest being MULTĀN (population, 87,394), JHANG-MAGHIĀNA (24,382), and DERA GHĀZI KHĀN (23,731). The whole area is flat, excepting a spur of the Salt Range which runs into Miānwāli, and the Sulaimān range which divides Dera Ghāzi Khān from the trans-frontier Baloch tribes. A great part of the Division is desert, but the Chenāb Canal is rapidly changing the face of Jhang. Multān is the only place of first-rate commercial importance, though Dera Ghāzi Khān is a collecting mart for trans-Indus products, and Lyallpur is rapidly becoming a centre of trade. The historical importance of Multān and MANKERĀ is considerable. Fort Munro in the Sulaimān range (6,300 feet) and Sakesar in the Salt Range (5,010 feet) are minor sanitaria.

Multān District.—District in the Multān Division of the Punjab, lying between 29° 22′ and 30° 45′ N. and 71° 2′ and 72° 52′ E., with an area of 6,107 square miles. It consists of an obtuse wedge of land, enclosed by the confluent streams of the Chenāb and the Sutlej, which unite at its south-western extremity. The irregular triangle thus cut off lies wholly within the Bāri Doāb; but the District boundaries have been artificially prolonged across the Rāvi in the north, so as to include a small portion of the Rechna Doāb. It is bounded on the east by Montgomery and on the north by Jhang; while beyond the Chenāb on the west lies Muzaffargarh, and beyond the Sutlej on the south the State of Bahāwalpur. The past or present courses of four of the great rivers of the Punjab determine the conformation of the

Multān plain. At present the Sutlej forms its southern and the Chenāb its north-western boundary, while the Rāvi intersects its extreme northern angle. Along the banks of these three streams extend fringes of alluvial riverain, flooded in the summer months, and rising into a low plateau watered by the inundation canals. Midway between the boundary rivers, a high dorsal ridge enters the District from Montgomery, forming a part of the sterile region known as the Bār. It dips into the lower plateau on either side by abrupt banks, which mark the ancient beds of the Rāvi and Beās. These two rivers once flowed for a much greater distance southward before joining the Chenāb and the Sutlej than is now the case; and their original courses may still be distinctly traced, not only by the signs of former fluvial action, but also by the existence of dried-up canals. The Rāvi still clings to its ancient watercourse, as observed by General Cunningham, and in seasons of high flood finds its way as far as Multān by the abandoned bed. During the winter months, however, it lies almost dry. It is chiefly interesting for the extraordinary reach known as the Ṣidhnai, a cutting which extends in a perfectly straight line for 10 or 12 miles, as to whose origin nothing can be said with certainty. The Chenāb and Sutlej, on the other hand, are imposing rivers, the former never fordable except in exceptionally dry winters, the latter only at a few places. Near their confluence the land is regularly flooded during the summer months.

Physical aspects.

The District contains nothing of geological interest, as the soil is entirely alluvial. The flora combines species characteristic of the Western Punjab, the trans-Indus country, Sind, and Rājputāna, but has been much changed, since Edgeworth's *Florula Mallica* was written, by extension of canal-irrigation. The date-palm is largely cultivated, and dates are exported. A variety of mango is also grown, with a smaller and more acid fruit than the sorts reared in Hindustān and the submontane Punjab.

Wolves are not uncommon, while jackals and foxes are numerous. The antelope most frequently met with is the 'ravine deer' (Indian gazelle), but *nīlgai* are also seen.

The heat and dust of Multān are proverbial; but on the whole the climate is not so bad as it is sometimes painted, and, as elsewhere in the Punjab, the cold season is delightful. The hot season is long, and, during the months in which high temperatures are recorded, Multān is only one or two degrees below Jacobābād. Though elsewhere the mean temperature may be higher, there is no place in India, except Jacobābād, where the thermometer remains high so consistently as at Multān. The nights, however, are comparatively cool in May, the difference between the maximum and

minimum temperatures sometimes exceeding 40°. The general dryness of the climate makes the District healthy on the whole, though the tracts liable to flood are malarious. The rainfall is scanty in the extreme, the average varying from 4 inches at Mailsi to 7 at Multān. The greatest fall recorded during the twenty years ending 1903 was 19·9 inches at Multān in 1892–3, and the least 1·3 inches at Lodhrān in 1887–8. Severe floods occurred in 1893–4 and 1905.

History.

The history of Multān is unintelligible without some reference to its physical history, as affected by the changes in course of the great rivers[1]. Up to the end of the fourteenth century the Rāvi seems to have flowed by Multān, entering the Chenāb to the south of the city. The Beās flowed through the middle of the District, falling into the Chenāb, a course it appears to have held until the end of the eighteenth century; while possibly as late as 1245 the Chenāb flowed to the east of Multān. It has also been held that in early times the Sutlej flowed in the present dry bed of the Hakrā, some 40 miles south of its present course. When the District was thus intersected by four mighty rivers, the whole wedge of land, except the dorsal ridge of the Bār, could obtain irrigation from one or other of their streams. Numerous villages then dotted its whole surface; and Al Masūdi, in the tenth century, describes Multān, with Oriental exaggeration, as surrounded by 120,000 hamlets.

In the earliest times the city now known as Multān probably bore the name of Kāsyapapura, derived from Kāsyapa, father of the Adityās and Daityās, the sun-gods and Titans of Hindu mythology. Under the various Hellenic forms of this ancient designation, Multān figures in the works of Hecataeus, Herodotus, and Ptolemy. General Cunningham believes that the Kaspeiraea of the last-named author, being the capital of the Kaspeiraei, whose dominions extended from Kashmīr to Muttra, must have been the principal city in the Punjab towards the second century of the Christian era. Five hundred years earlier Multān perhaps appears in the history of Alexander's invasion as the chief seat of the Malli, whom the Macedonian conqueror utterly subdued after a desperate resistance. He left Philippus here as Satrap; but it seems probable that the Hellenic power in this distant quarter soon came to an end, as the country appears shortly afterwards to have passed under the rule of the Maurya dynasty of Magadha. At a later period Greek influence may once more have extended to Multān under the Bactrian kings, whose coins are occasionally found in the District. In the seventh century A.D. Multān was the capital of an important province in the kingdom of Sind, ruled by a line of Hindu kings known as the Rais, the last of whom died in 631. The throne was

[1] A. Cunningham, *Ancient Geography of India*, pp. 221–2; Raverty in *Journal, Asiatic Society, Bengal*, vol. lxi, 1892; and Oldham, *Calcutta Review*, vol. lix, 1874.

then usurped by a Brāhman named Chach, who was in power when the Arabs first appeared in the valley of the Indus. During his reign, in 641, the Chinese Buddhist pilgrim, Hiuen Tsiang, visited Multān, where he found a golden image of the Sun. This idol is repeatedly mentioned by the Arab historians, and from it General Cunningham derives the modern name of the city, though other authorities connect it rather with that of the Malli.

In 664 the Arab inroads penetrated as far as Multān; but it was not until 712 that the district fell, with the rest of the kingdom of Sind, before Muhammad bin Kāsim, who conquered it for the Khalīfas. [For] three centuries Multān remained the outpost of Islām; but the [oc]cupation was in the main military, and there was no general settlement of Muhammadan invaders or conversion of Hindu inhabitants till the Ghaznivid period. It was twice again captured by the Arabs, and in 871 the Lower Indus valley fell into the hands of Yakūb bin Lais. Shortly afterwards two independent Muhammadan kingdoms sprang up with their capitals at Mansūra and Multān. Multān was visited in 915-6 by the geographer Masūdi, who says that 'Multān' is a corruption of Mūlasthānapura, by which name it was known in the Buddhist period. He found it a strong Muhammadan frontier town under a king of the tribe of Koresh, and the centre of a fertile and thickly populated district. In 980 the Karmatians took Multān, and converted to their heresy the family of Lodī Pathāns, who had by that time possessed themselves of the frontier from Peshāwar to Multān. When Mahmūd of Ghazni took Bhātia (probably Uch), Abul Fateh, the Lodī governor of Multān, allied himself with Anand Pāl, but submitted in 1006. He again revolted, and in 1010 was deported by Mahmūd, who made his son Masūd governor. Masūd released Abul Fateh, who had apparently abandoned the Karmatian tenets; for a letter of 1032, which has been preserved by the Druses, addressed to [th]e Unitarians of Sind and Multān, and in particular to Shaikh bin Sumar of Multān, exhorts them to bring him back into the true faith.

For the next three centuries the history of Multān, as the frontier province of the empire, is practically the history of the Mongol invasions. Owing to the difficulties of the Khyber route and the hostility of the Gakhars, the majority of the invading hordes took the Multān road to Hindustān, until the drying up of the country all along the Ghaggar made this route impracticable. Between 1221 and 1528 ten invasions swept through the District, commencing with the celebrated flight of Jalāl-ud-dīn Khwārizm and ending with the peaceful transfer of the province to Bābar in 1528, while the city suffered sacks and sieges too numerous to detail. During this period Multān was for the most part subject to Delhi, but twice it was a separate and independent kingdom.

On the death of Kutb-ud-dīn, Nāsir-ud-dīn Kubācha seized Multān, with Sind and Seistān (1210), and ruled independently till 1227. After successfully resisting a Mongol siege in 1221, Multān was reduced in 1228 by the governor of Lahore under Altamsh, and again became a fief of the Delhi empire. On that emperor's death, its feudatory Izz-ud-dīn Kabīr Khān-i-Ayāz joined in the conspiracy to put Razia on the throne (1236); but though he received the fief of Lahore from her, he again rebelled (1238), and was made to exchange it for Multān, where he proclaimed his independence, and was succeeded by his son Tāj-ud-dīn Abū-Bakr-i-Ayāz (1241), who repelled several Karlugh attacks from the gates of the city.

Saif-ud-dīn Hasan, the Karlugh, unsuccessfully attacked Multān (1236). After his death the Mongols held the city to ransom (1246), and at last it fell into the hands of the Karlughs, from whom it was in the same year (1249) wrested by Sher Khān, the great viceroy of the Punjab. Izz-ud-dīn Balban-i-Kashlu Khān endeavoured to recover Uch and Multān (1252), and succeeded in 1254. Mahmūd Shāh I bestowed them on Arsalān Khān Sanjar-i-Chast, but Izz-ud-dīn was reinstated in 1255. He rebelled against the minister Ghiyās-ud-dīn Balban (1257), and being deserted by his troops fled to Hulākū in Irāk, whence he brought back a Mongol intendant to Multān and joined a Mongol force which descended on the province, and dismantled the walls of the city, which only escaped massacre by a ransom paid by the saint Bahāwal Hakk (Bahā-ud-dīn Zakariyā).

For two centuries the post of governor was held by distinguished soldiers, often related to the ruling family of Delhi, among whom may be mentioned Ghāzi Malik, afterwards Ghiyās-ud-dīn Tughlak. In 1395 Khizr Khān, the governor, a Saiyid, quarrelled with Sārang Khān, governor of Dīpālpur, and, being taken prisoner, escaped to join Tīmūr on his invading the Punjab. After being compelled to raise the siege of Uch, Tīmūr's grandson defeated Sārang Khān's forces on the Beās, and invested Multān, which surrendered after a siege (1398), and Khizr Khān was reinstated in his governorship. After a series of victories over the Delhi generals, Khizr Khān took Delhi and founded the Saiyid dynasty. Some years later Bahlol Lodī held the province before seizing the throne of Delhi. In 1437 the Langāhs, a Pathān tribe recently settled in the District, began to make their power felt; and in 1445 Rai Sahra Langāh expelled Shaikh Yūsuf, a ruler chosen by the people and his own son-in-law, and established the Langāh dynasty, which ruled independently of Delhi for nearly 100 years, the Rāvi being recognized in 1502 as the boundary between the two kingdoms. Finally, however, the Arghūn Turks incited by Bābar took Multān in 1527, and in the following year handed it over to him. Under the Mughal emperors Multān enjoyed a period of peace and

prosperity, only disturbed by the rebellion of the Mirzas, who were defeated at Talamba in 1573, and by the flight of Dārā Shikoh through the province. The town became the head-quarters of a *Sūbah* covering the whole of the South-West Punjab and at times including Sind. Even when the Mughal power began to wane Multān no longer felt the first shock of invasion, the route through Multān and Bhatinda being now too dry to give passage to an army. In 1748 a battle was fought near Multān between Kaura Mal, deputy of Mīr Mannu, the governor of the Punjab, and Shāhnawāz, who had received a grant of the province from the late emperor Muhammad Shāh. Kaura Mal was victorious, but fell later fighting against Ahmad Shāh Durrāni. Multān in 1752 became a province of the kings of Kābul, ruled for the most part by Pathān governors, chiefly Sadozais, who ultimately founded a virtually independent kingdom. Their rule, however, extended over only half the present District, the southern portion being under the Nawābs of Bahāwalpur. The Marāthās overran the province in 1758, but the chief feature of this period was the continual warfare with the Sikhs. From 1771–9 the Bhangī confederacy held the north and centre of the District, but they were expelled by Tīmūr Shāh, and from 1779 to 1818 Nawāb Muzaffar Khān Sadozai was in power in Multān. His relations with the Bahāwalpur State were strained, and he had to face unassisted the repeated onslaughts of the Sikhs, which culminated in the capture and sack of Multān by Ranjīt Singh in 1818.

After passing through the hands of two or three Sikh governors, Multān was in 1821 made over to the famous Dīwān Sāwan Mal. The whole country had almost assumed the aspect of a desert from frequent warfare and spoliation; but Sāwan Mal induced new inhabitants to settle in his province, excavated numerous canals, favoured commerce, and restored prosperity to the desolated tract. After the death of Ranjīt Singh, however, quarrels took place between Sāwan Mal and Rājā Gulāb Singh; and in 1844 the former was fatally shot in the breast by a soldier. His son Mūlrāj succeeded to his governorship, and also to his quarrel with the authorities at Lahore, till their constant exactions induced him to tender his resignation. After the establishment of the Council of Regency at Lahore, as one of the results of the first Sikh War, difficulties arose between Dīwān Mūlrāj and the British officials, which culminated in the murder of two British officers, and finally led to the Multān rebellion. That episode, together with the second Sikh War, belongs rather to imperial than to local history. It ended in the capture of Multān and the annexation of the whole of the Punjab by the British. The city offered a resolute defence, but, being stormed on January 2, 1849, fell after severe fighting; and though the fort held out for a short time longer, it was surrendered at discretion by Mūlrāj on January 22. Mūlrāj was put upon his trial for the

30

murder of the officers, and, being found guilty, was sentenced to death; but this penalty was afterwards commuted for that of transportation. The District at once passed under direct British rule. In 1857 the demeanour of the native regiments stationed at Multān made their disarmament necessary, and, doubtless owing to this precaution, no outbreak took place.

The principal remains of archaeological interest are described in the articles on ATĀRI, JALĀLPUR, KAHROR, MULTĀN, and TALĀMBA.

Population.

The District contains 6 towns and 1,351 villages. The population at each of the last three enumerations was: (1881) 556,557, (1891) 635,726, and (1901) 710,626. During the last decade it increased by 11·7 per cent., the increase being greatest in the Multān *tahsīl* and least in Lodhrān. The increase was largely due to immigration, for which the attractions of the city are partly responsible, and to some extent to the colonization of the Sidhnai Canal tract between 1886 and 1896. The District is divided into five *tahsīls*, MULTĀN, SHUJĀBĀD, LODHRĀN, MAILSI, and KABĪRWĀLA, the head-quarters of each being at the place from which it is named. The chief towns are the municipalities of MULTĀN, the administrative head-quarters of the District, SHUJĀBĀD, KAHROR, TALAMBA, and JALĀLPUR. The following table shows the chief statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Multān	953	1	289	232,126	243·6	+ 21·9	19,726
Kabīrwāla	1,603	1	320	130,507	81·4	+ 15·1	6,338
Mailsi	1,658	...	332	109,727	66·2	+ 3·5	4,213
Lodhrān	1,057	2	262	113,359	107·2	+ 3·3	4,710
Shujābād	680	2	148	124,907	183·7	+ 8·9	5,546
District total	6,107	6	1,351	710,626	116·4	+ 11·7	40,533

NOTE.—The figures for the areas of *tahsīls* are taken from revenue returns. The total District area is that given in the *Census Report*.

Muhammadans number 570,254, or over 80 per cent. of the total; Hindus, 133,560; and Sikhs, 4,662. The density of population is very low, but is comparatively high if the cultivated area only be taken into account. The language of the people, often called Multānī, is a form of Western Punjābi.

The most numerous tribe is that of the agricultural Jats, who number 140,000, or 20 per cent. of the total population. Next to them come the Rājputs (92,000), and after them Arains (32,000), cultivators and market-gardeners. Then come the Baloch (24,000), Khokhars (12,000),

and Pathāns (8,000). The Saiyids number 11,000, and Kureshis 8,000. Of the commercial classes, the Aroras, who are found in larger numbers in Multān than in any other District of the Province, number 89,000; the Khattrīs, who are largely immigrants from the Punjab proper, only 11,000. The Muhammadan Khojas, more numerous here than in any other District in the Punjab except Montgomery and Lahore, number 10,000. The Bhātias (3,000), though small in numbers, also deserve mention as a commercial caste. Of the artisan classes, the Julāhās (weavers, 27,000), Mochīs (shoemakers and leather-workers, 24,000), Kumhārs (potters, 19,000), and Tarkhāns (carpenters, ,600) are the most important; and of the menial classes, the sweepers (38,000), who are mostly known in this District as Kutānās, Dhobis (washermen, 15,000, known as Charhoas), Māchhis (fishermen, bakers, and water-carriers, 12,000), and Nais (barbers, 8,000). The Mīrāsīs, village minstrels and bards, number 11,000. Other castes worth mention are the Mahtams (5,900), of whom the Muhammadan section are generally cultivators, while the Hindus make a living by clearing jungle or hunting game; Ods (4,000), a wandering caste living by earthwork; Jhabels (3,000), a fishing and hunting tribe of vagrant habits, living on the banks of the Sutlej; and Marths (700), also a vagrant tribe found only in this District. About 40 per cent. of the population are supported by agriculture, and 28 per cent. by industries.

The Church Missionary Society began its operations at Multān city in 1855, and the mission school, the oldest in the District, was established there in the following year. The mission also maintains a church, a female hospital, and a branch of the Punjab Religious Book Dépôt. The American Methodist Episcopal Mission began work at Multān in 1893. The District contained 198 native Christians in 1901.

Agriculture.

The soil is of a uniform alluvial composition, with sand everywhere at a greater or less depth from the surface; and the chief distinction of soils depends on the proportions in which the sand and clay are intermixed, though there are also some tracts of salt-impregnated earth. From an agricultural point of view, however, all distinctions of soil are insignificant compared with that between irrigated and unirrigated land, and the agricultural conditions depend almost entirely on the quality and quantity of irrigation.

The District is held chiefly by small peasant proprietors, but large estates cover 627 square miles and lands held under temporary leases from Government about 533 square miles. The area for which details are available from the revenue records of 1903–4 is 5,952 square miles, as shown in the table on the next page.

Wheat is the chief crop of the spring harvest, covering 555 square miles in 1903–4. Gram and barley covered only 40 and 21 square

miles respectively. The great and spiked millets (*jowār* and *bājra*) are the principal staples of the autumn harvest, covering 94 and 58 square miles; and pulses occupied 69 square miles. There were 26 square miles under indigo, 20 under rice, and 102 under cotton. Very little sugar or maize is grown.

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Multān	953	364	331	242	268
Kabīrwāla	1,604	343	298	304	889
Mailsi	1,656	311	244	374	882
Lodhrān	1,058	267	248	382	316
Shujābād	681	256	189	289	60
Total	5,952	1,541	1,310	1,591	2,415

The area under cultivation varies enormously with the character of the season, but the average area sown increased by about 30 per cent. in the twenty years ending 1901–2, owing to the extension of canal- and well-irrigation. Loans for the construction of wells are taken readily, and more than 3 lakhs was advanced under the Land Improvement Loans Act during the five years ending 1903–4.

Four breeds of cattle are recognized: the Bhāgnāri (from Sind), the Massuwāh and Dājal (from Dera Ghāzi Khān), and the local breed, which is mostly of an inferior description. Cow buffaloes are kept for milk. Camels are very largely bred, and sheep and goats are common in all parts. Horses and ponies are numerous, but the District is only a moderately good one for horse-breeding. The Army Remount department maintains six horse and eleven donkey stallions, and the District board one donkey and three pony stallions.

Of the total area cultivated in 1903–4, 1,310 square miles, or 85 per cent., were classed as irrigated. Of this area, 123 square miles were supplied from wells, 758 from wells and canals, 417 from canals, and 12 from channels and tanks. In addition, 276 square miles, or 18 per cent. of the cultivated area, are subject to inundation from the Chenāb, Sutlej, and Rāvi. Three great canal systems irrigate the District: the SIDHNAI taking off from the Rāvi, the LOWER SUTLEJ INUNDATION CANALS, and the CHENĀB INUNDATION CANALS. As these canals flow only while the rivers are in flood, they generally require to be supplemented by wells. The District possesses 21,615 wells, all worked by Persian wheels, and 3,744 unbricked wells, lever wells, and water-lifts. The latter are largely used for lifting water from river channels.

The District contains 157 square miles of 'reserved' and 2,323 of 'protected' forests, under the Deputy-Conservator of the Multān Forest division. These forests are chiefly waste land covered with scrub and

scattered trees. Avenues of *shīsham* (*Dalbergia Sissoo*) are found along the roads and canals, and the date-palm is grown largely, considerable quantities of the fruit being exported. The revenue from forests under the Forest department in 1903–4 was 1·2 lakhs.

Saltpetre is manufactured to some extent, and a little *kankar* is found. Impure carbonate of soda is also made from the ashes of *Haloxylon recurvum*, which grows wild in considerable quantities.

Trade and communications.

The industrial products for which the city of Multān is noted are glazed pottery, enamelling on silver, silver ornaments, cotton and woollen carpets, silk fabrics, mixed textures of cotton and silk, cotton printing, metal-work, and ivory-turning. The glazed pottery work, which used to be confined to the manufacture of tiles, now largely takes the form of ornamental vases, plaques, &c., and the enamelling industry is on the increase. The manufacture of carpets has greatly fallen off. Multān is second only to Amritsar in the manufacture of silk, and over 40,000 yards of silk fabrics and 200,000 of silk and cotton mixtures are produced annually. A large number of ivory bangles are turned. The metal-work consists chiefly of the manufacture of dispatch boxes and uniform cases, which is a rapidly growing industry. Cotton cloth is woven, and a once flourishing paper manufacture still lingers. Multān city has a railway workshop, with 315 employés in 1904; and 10 cotton-ginning and 3 cotton-pressing factories, with a total of 657 hands. At Shujābād a ginning factory employs 21 hands, and at Rashīda on the North-Western Railway a ginning factory and cotton-press employs 150.

The District exports wheat, cotton, indigo, bones, hides, and carbonate of soda; and imports rice, oilseeds, oil, sugar, *ghī*, iron, and piece-goods. The imports of raw wool exceed the exports, but cleaned wool is a staple of export. The chief items of European trade are wheat, cotton, and wool. Multān city is the only commercial place of importance, and has long been an important centre of the wheat trade.

The District is traversed by the North-Western Railway main line from Lahore to Karāchi, which is joined by the Rechna Doāb branch from Wazīrābād and Lyallpur at Khānewāl. After reaching Multān city the line gives off the branch running through Muzaffargarh, along the Indus valley, which leaves the District by a bridge over the Chenāb. It then turns south, and enters Bahāwalpur by a bridge over the Sutlej. The total length of metalled roads is 31 miles and of unmetalled roads 1,199 miles; of these, 13 miles of metalled roads are under the Public Works department, and the rest are maintained by the District board. There is practically no wheeled traffic, goods being carried by camels, donkeys, or pack-bullocks. The Chenāb is crossed by ten ferries, the

Sutlej by thirty-one, and the Rāvi by twelve. There is but little traffic on these rivers.

Famine.

Before British rule cultivation was confined to the area commanded by wells, and though drought might contract the cultivated area and cause great loss of cattle, real famine could never occur. The extension of cultivation that has taken place since annexation has followed the development of irrigation by wells and canals; and though considerable loss of cattle is still incurred in times of drought, the District is secure from famine, and exports wheat in the worst years. The area of crops matured in the famine year 1899–1900 amounted to 75 per cent. of the normal.

Administration.

The District is in charge of a Deputy-Commissioner, aided by two Assistant or Extra-Assistant Commissioners and two Revenue Assistant Commissioners, of whom one is in charge of the District treasury. It is divided for general administrative purposes into the five *tahsīls* of MULTĀN, SHUJĀBĀD, LODHRĀN, MAILSI, and KABĪRWĀLA, each under a *tahsīldār* assisted by two *naib-tahsīldārs*. Multān city is the head-quarters of a Superintending Engineer and two Executive Engineers of the Canal department, and of an Extra-Assistant Conservator of Forests.

The Deputy-Commissioner as District Magistrate is responsible for criminal justice. Civil judicial work is under a District Judge; and both officers are supervised by the Divisional Judge of the Multān Civil Division, who is also Sessions Judge. There are two Munsifs, both at head-quarters. Cattle-theft is the principal crime of the District, but burglary is also becoming common. Cattle-lifting is regarded as a pastime rather than a crime, and proficiency in it is highly esteemed.

The greater part of the District was administered for twenty-three years by Dīwān Sāwan Mal. He adopted the system usual with native rulers of taking a share of one-third, one-fourth, or one-sixth of the produce, or else a cash assessment based on these proportions but generally calculated a little higher than the market rate. Cash rates per acre were levied on the more valuable crops. Another form of assessment was the lease or *patta*, under which a plot of 15 to 20 acres, generally round a well, paid a lump annual sum of Rs. 12 or more. In addition, many cesses and extra dues were imposed, until the uttermost farthing had in some way or other been taken from the cultivator.

On annexation, the first summary settlement was made at cash rates fixed on the average receipt of the preceding four years. Prices, however, had fallen; and the fixity of the assessment, added to the payment in cash, pressed hardly on the people, and the assessment broke down. The second summary settlement made in 1853–4, despite

reductions and attempts to introduce elasticity in collections, did not work well. In 1857–60 a regular settlement was undertaken. A fixed sum was levied in canal areas, amounting to 16 per cent. below the previous assessment, to allow for varying conditions. It was estimated that about 54 per cent. of the revenue might require to be remitted in bad years. In point of fact remissions were not given, but the assessment was so light that this was not felt. In 1873 a revised settlement was begun. The new revenue was 86 per cent. of the half 'net assets,' and an increase of 40 per cent. on the last demand. A fluctuating system, which made the assessments depend largely on actual cultivation, was definitely adopted in riverain tracts, and the system of remission proposed at the regular settlement was extended in the canal areas.

The current settlement, completed between 1897 and 1901, was a new departure in British assessments, though the resemblance to Sāwan Mal's system is notable. On every existing well is imposed a lump assessment, which is classed as fixed revenue, and paid irrespective of the area from time to time irrigated by the well; if, however, the well falls out of use for any cause, the demand is remitted. All cultivation other than that dependent entirely on well-water pays at fluctuating rates, assessed on the area matured in each harvest. Thus, although the revenue is approximately 92 per cent. of the half 'net assets,' and the demand of the former settlement has been more than doubled, there is no fear of revenue being exacted from lands which have no produce to pay it with. The crop rates vary from Rs. 3–5 per acre on wheat, tobacco, &c., to Rs. 2–2 on inferior crops. The demand, including cesses, was 17·5 lakhs in 1903–4. The average size of a proprietary holding is 8·3 acres.

The collections of land revenue alone and of total revenue are shown below, in thousands of rupees :—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . . .	7,61	8,26	6,60	7,77*
Total revenue . . .	9,72	11,22	12,05	13,16

* These figures are for the financial year ending March 31, 1904. The demand figures given above (17·5 lakhs, including cesses) are for the agricultural year, and include the revenue demand for the spring harvest of 1904, which was very much higher than that for the corresponding harvest of 1903.

The District contains five municipalities, MULTĀN, SHUJĀBĀB, KAHROR, TALAMBA, and JALĀLPUR; and one 'notified area,' DUNYĀPUR. Outside these, local affairs are managed by the District board. The expenditure of the board in 1903–4 was 1·1 lakhs, education being the largest individual item. Its income, which is mainly derived from a local rate, slightly exceeded the expenditure.

The regular police force consists of 804 of all ranks, including 41 cantonment and 252 municipal police, under a Superintendent, who usually has one Assistant Superintendent and 5 inspectors under him. The village watchmen number 943. The District is divided into 18 police circles, with 5 outposts and 9 road-posts. The District jail at head-quarters has accommodation for 743 prisoners. It receives prisoners sentenced to terms not exceeding three years from the Districts of Multān and Muzaffargarh, and in the hot season from Miānwāli. The Central jail, situated 4 miles outside the city, is designed to hold 1,197 prisoners. Convalescents from all jails in the Punjab are sent here.

Multān stands third among the twenty-eight Districts of the Province in respect of the literacy of its population. In 1901, 5·7 per cent. of the population (10·1 males and 0·4 females) could read and write. The high proportion of literate persons is chiefly due to the Hindus, among whom education is not, as elsewhere, practically denied to the lower castes. The number of people under instruction was 3,684 in 1880–1, 7,355 in 1890–1, 8,156 in 1900–1, and 8,881 in 1903–4. In the last year the District had one training, one special, 13 secondary and 82 primary (public) schools, and 26 advanced and 141 elementary (private) schools, with 296 girls in the public and 166 in the private schools. The chief institutions are a Government normal school and three high schools at Multān city. The District also possesses five *zamīndāri* schools, where special concessions are made for the purpose of extending education to the agricultural classes. There is a school of music (unaided) for boys at Multān. The expenditure on education in 1903–4 was Rs. 89,000, of which fees contributed Rs. 25,000, municipalities Rs. 16,000, the District fund Rs. 19,000, and Provincial revenues Rs. 22,000, the rest coming from subscriptions and endowments.

Besides the civil hospital, two city branch dispensaries, and the Victoria Jubilee Hospital for women in Multān city, the District possesses eight outlying dispensaries. At these institutions, 119,044 out-patients and 2,510 in-patients were treated in 1904, and 6,153 operations were performed. The Church Missionary Society also maintains a female hospital at Multān. The total expenditure in 1904 was Rs. 27,000, Rs. 16,000 being contributed by District and municipal funds in equal shares.

The number of persons vaccinated in 1903–4 was 27,700, representing 39 per 1,000 of the population. Vaccination is compulsory in Multān city.

[E. D. Maclagan, *District Gazetteer* (1901–2); *Settlement Report* (1901); and 'Abul Fazl's Account of the Multān Sarkār,' *Journal As. Soc. of Bengal* (1901), p. 1; Saiyid Muhammad Latif, *Early History*

of Multān (1891); C. A. Roe, *Customary Law of the Multān District* (revised edition, 1901); E. O'Brien, *Glossary of the Multānī Language*, revised edition, by J. Wilson and Pandit Hari Kishan Kaul (1903).]

Multān Tahsīl.—*Tahsīl* of Multān District, Punjab, lying between 29° 29′ and 30° 28′ N. and 71° 17′ and 71° 58′ E., with an area of 953 square miles. Its north-west border rests on the Chenāb. It consists of the Chenāb lowlands, which are subject to periodical inundation from the river, a higher tract farther east irrigated by inundation canals, and a still higher strip beyond irrigated in part by the Sidhnai Canal. The population in 1901 was 232,126, compared with 190,431 in 1891. The *tahsīl* head-quarters are at MULTĀN CITY (population, 87,394). It also contains 289 villages. The land revenue and cesses in 1903–4 amounted to 4·9 lakhs.

Multān City.—Head-quarters of the Multān Division, District, and *tahsīl*, in the Punjab, situated in 30° 12′ N. and 71° 31′ E., on the North-Western Railway, 576 miles from Karāchi and 1,429 from Calcutta. The city is built on a mound, the accumulated *débris* of ages, at a distance of 4 miles from the present left bank of the Chenāb, enclosed on three sides by a wall from 10 to 20 feet in height, but open towards the south, where the old dry bed of the Rāvi intervenes between the city and the citadel. As late as the days of Tīmūr, the Rāvi seems to have flowed past Multān, joining the Chenāb 10 miles lower down; and the original site consisted of two islands, which are now picturesquely crowned by the city and citadel, at an elevation of 50 feet above the surrounding country. Population (1901), 87,394, including 46,899 Muhammadans and 36,947 Hindus.

Multān, formerly called Kashtpur, Hanspur, Bāgpur, Sanb or Sanābpur, and finally Mūlasthān, derives its name from that of the idol and temple of the Sun, a shrine of vast wealth in the pre-Muhammadan period. As one of the frontier towns of India, it has been from the earliest times of the greatest historical importance, and its history is given in detail with that of MULTĀN DISTRICT. Tradition identifies the present site with the strong city of the Malli, stormed by Alexander. For the next thousand years the conquerors of Multān present an amazing variety of race—Graeco-Bactrians are followed by the Kushans, who in turn give place to the White Huns. When the Arabs first penetrated the valley of the Indus, the town was ruled by Chach, a Brāhman usurper, who died in A.D. 671. The Arabs entered India from Sind, and after a victorious campaign they captured and garrisoned Multān. For three centuries the garrison remained the outpost of Islām in India, though by 900 the Multān governor was independent of Baghdād. About that time the followers of Abdullah, the Karmatian, seized Multān. Mahmūd, the orthodox ruler of Ghazni, waged perpetual war upon this heretical sect, and the Ghaznivids kept a nominal

control over Multān until Muhammad of Ghor overthrew them. The city fared but ill throughout these sectarian wars, and is said to have been deserted when the Gardezi Saiyids first migrated there in the twelfth century.

From 1206 to 1528 Multān was nominally subject to the kings of Delhi, though in fact it was almost independent. In 1397 Tīmūr occupied the city on his way to Delhi, and in 1528 it passed to Bābar. Always the route chosen by the earlier invaders, whether going or returning, the province of Multān passed with its capital city from hand to hand, with short space to recover from one devastation ere the next came upon it. Under the strong government of the early Mughal emperors, Multān at last enjoyed 200 years of peace. The trade route from Hindustān to Persia passed through it, and Multān itself became a trading city. The later invaders chose the northern route, and Multān owed its immunity to the desert which had suddenly replaced the fertile lands of Sind.

In 1752 the nominal allegiance of Multān was transferred from Delhi to Kābul. In 1771 the Sikhs appeared before the gates, and the city was constantly threatened from that date until it was stormed by Ranjīt Singh in 1818. In 1821 Dīwān Sāwan Mal became its governor, and a just, if absolute, autocracy replaced the confusion of the Pathān régime. The first Sikh War did not affect Multān; but the murder of two British officers here by Mūlrāj, son of Sāwan Mal, led to the second Sikh War, in which it was captured on January 3, 1849. The fortifications were dismantled in 1854. In the Mutiny the garrison was quietly disarmed by orders of the Chief Commissioner. In consequence of a riot which broke out in September, 1881, between Hindus and Muhammadans the city was occupied by troops for ten days, and a punitive police post was imposed on the city for a year.

Large and irregular suburbs have grown up outside the walls since the annexation in 1849. Within the city proper, one broad bazar, the Chauk, runs from the Husain Gate for a quarter of a mile into the centre of the city, ending at the Wali Muhammad Gate, from which three broad streets lead to the various gates of the city. The other streets are narrow and tortuous, often ending in *culs-de-sac.* The principal buildings include the shrines of the Muhammadan saints, Bahā-ud-dīn and Rukn-ul-ālam (of the Arab tribe of Kuresh, to which the Prophet belonged), which stand in the citadel. Close by are the remains of an ancient Hindu temple of the Narasingh Avatār of Vishnu, called Pahlādpuri, partially blown down by the explosion of the powder magazine during the siege of 1848–9. The great temple of the Sun once occupied the very middle of the citadel, but was destroyed during the reign of the zealous Muhammadan emperor Aurangzeb, who erected a Jāma Masjid or cathedral

mosque in its place. This mosque afterwards became the powder magazine of the Sikhs, and was blown up. Within the fort, and overlooking the city, is the plain, massive obelisk, 70 feet in height, erected in memory of Mr. Vans Agnew and Lieutenant Anderson, the two British officers murdered in April, 1848, at the outbreak of Mūlrāj's rebellion. East of the city is the Amkhās, formerly the audience hall and garden-house of the Hindu governors of Multān, now used as the *tahsīl* building. North of this is the cenotaph of Dīwān Sāwan Mal and the European cemetery. A fine public garden lies to the west of the city.

The civil station of Multān lies north and west of the native city, and the cantonment lies in the high stretch of land to the south-west. The garrison, which belongs to the Lahore division, consists of a company of garrison artillery, a battalion of British infantry, a regiment of Native cavalry, two of Native infantry, and a detachment of railway volunteers. The municipality was created in 1867. The income and expenditure during the ten years ending 1902–3 averaged 1·7 lakhs. The income in 1903–4 was 1·9 lakhs, the chief source being octroi (Rs. 1,51,000); while the expenditure of 1·8 lakhs included conservancy (Rs. 32,000), education (Rs. 29,000), medical (Rs. 19,000), public safety (Rs. 35,000), and administration (Rs. 26,000). The income and expenditure of cantonment funds during the ten years ending 1902–3 averaged Rs. 34,000.

As a trade centre, Multān is of the first importance, being connected by rail with Lahore and Karāchi, and by the Rāvi, Jhelum, and Chenāb with the whole Central Punjab. Large quantities of raw produce are shipped by country boats from Sher Shāh, the port of Multān, to Karāchi. The trade of Multān comprises every article of produce, manufacture, and consumption in the Province. The chief imports are cotton and other piece-goods; while the main staples of export are wheat, sugar, cotton, indigo, and wool. Leaving out of consideration what the city requires for its own use, the function of Multān as a trade centre is to collect cotton, wheat, wool, oilseeds, sugar, and indigo from the surrounding country, and to export them to the south; to receive fruits, drugs, raw silk, and spices from Kandahār traders, and to pass them on to the east. The Afghān traders take back indigo, European and country cotton cloth, sugar, and shoes. Multān receives European piece-goods and European wares generally, and distributes them to the western Districts and in its own neighbourhood. The chief local manufactures are silk- and cotton-weaving and carpet-making; country shoes are also made in large quantities for exportation. The glazed pottery and enamel work of Multān, although not industries on a large scale, have a high reputation, and the manufacture of tin boxes is a growing and

important industry. The North-Western Railway workshops give employment to 315 persons, and 10 cotton-ginning and three cotton-pressing factories have an aggregate of 657 hands. There is a branch of the Punjab Banking Company.

The chief educational institutions are the three high schools, a middle school for European boys, and St. Mary's Convent middle school for girls. There are English and Roman Catholic churches in the cantonment, and a station of the Church Missionary Society. Besides the civil hospital with two branch dispensaries, the Church Missionary Society maintains the Victoria Jubilee Hospital for Women.

Multhān.—*Thakurāt* in the BHOPĀWAR AGENCY, Central India.

Mundā.—An aboriginal tribe of the Chotā Nāgpur Division, Bengal, where they numbered 438,000 in 1901. They are mainly to be found in Rānchī District, and are closely akin to the Ho, BHUMIJ, and Santāl tribes. The name Mundā is of Sanskrit origin and denotes a 'village headman'; the people call themselves Horo (meaning 'man'). Their physical type is Dravidian, but their language is allied to those spoken by the Ho, Santāl, Bhumij, and other cognate tribes. These dialects form a distinct linguistic family, variously known as Mundā or Kol, the origin of which is one of the most obscure philological problems of the day. It was suggested by Logan that they were evolved from the contact of the southern Dravidian languages with Mon-Anam forms of speech brought to India by Mongolian invaders from the north-east. The majority of the tribe (296,000) are returned as Animists, but there are 85,000 Hindus and 56,000 Christians; conversion to Christianity has recently made rapid progress among this race.

The village community retains its primitive form among the Mundās, and is provided with a complete staff of village officials. The *mundā* is the headman; he is responsible for the rent of the village, which he collects and pays to the *mānki* or head of a group of villages, where there is one, or to the landlord. The *mahto* is an accountant, the *pahn* a priest, the *bhandāri* the landlord's agent, and the *gorait* a watchman. These officials are remunerated by grants of land held rent-free or at privileged rents, or by payments in grain or in cash, as are also the *ahīr* or cowherd, and the *lohār* or blacksmith. The system prevails in its entirety in the tract of Rānchī District which borders on Singhbhūm and is known as the *mānki-patti*. Here many of the *mānkis* and *mundās* are the descendants of the original chiefs, and still hold the villages which their ancestors founded. These villages are cultivated by the descendants of the original reclaimers, and each family is responsible for the payment of a fixed quota of the village rent. For many years past the landlords have been endeavouring to break down the prescriptive rights of these people, which they are most tenacious in asserting, and the discontent thus engendered culminated in the

Mundā rising of 1899. This outbreak was speedily suppressed; but, in order to remove the grievances complained of, the Mundā tract is being surveyed and settled, and an Act has been passed by the Local Government to protect the rights of these village communities.

In the early part of the last century the Mundās gave a great deal of trouble. There were outbreaks in 1811 and in 1820; and in 1831 a serious insurrection took place, caused by the lease of some villages by the brother of the Mahārājā of Chotā Nāgpur to Sikhs and other foreigners. This insurrection was suppressed with some difficulty in 1832 by Captain (afterwards Sir Thomas) Wilkinson.

Mundargi.—Village in the Gadag *tāluka* of Dhārwār District, Bombay, situated in 15° 12′ N. and 75° 53′ E., at the base of a hill on which stands a ruined fort, about 24 miles south-east of Gadag town. Population (1901), 4,657. Its position on the Nizām's frontier has helped Mundargi to grow into a large market town. At the time of the Mutiny of 1857, it was under an hereditary district officer named Bhimrao Nadgir, who corresponded with the rebel chief of NARGUND and murdered a British guard. He subsequently fell at the siege of Kopal. The village contains three schools, including one for girls.

Mundeswarī.—Hill in the Bhabuā subdivision of Shāhābād District, Bengal, situated in 25° 2′ N. and 83° 35′ E. It is the site of an interesting Hindu temple, dating from the sixth or seventh century, which is said to have been built by Manda Daitya, probably a Chero chief.

[M. Martin (Buchanan Hamilton), *Eastern India*, vol. i (1838).]

Mundlāna (*Mandlāna*).—Village in the Gohāna *tahsīl* of Rohtak District, Punjab, situated in 29° 12′ N. and 76° 50′ E. Population (1901), 5,657. It is administered as a 'notified area.'

Mundlesoor.—Town in the Indore State, Central India. *See* MANDLESHWAR.

Mundra.—Port in the State of Cutch, Bombay, situated in 22° 49′ N. and 69° 52′ E., on the coast of the Gulf of Cutch, 29 miles south of Bhūj. Population (1901), 10,600. There is a made road from the port to the town, which is 3½ miles distant. The fort, which is situated 2½ miles north of the port, contains a white mosque distinguishable a good way off. The municipal income in 1903–4 was Rs. 4,000. The town contains a dispensary.

Mūndwa.—Town in the Nāgaur district of the State of Jodhpur, Rājputāna, situated in 27° 4′ N. and 73° 49′ E., on the Jodhpur-Bīkaner Railway, 89 miles north-east of Jodhpur city. Population (1901), 5,121. Mūndwa is a commercial mart of some importance, noted for wooden toys and other fancy articles, and is the home of several prosperous Mārwāri traders having business connexions in various parts of India.

Mūng.—Village in Gujrāt District, Punjab. *See* MONG.

Mungaolī.—Head-quarters of the Isāgarh district of Gwalior State,

Central India, situated in 24° 25′ N. and 78° 8′ E., on the left bank of the Betwā river. Population (1901), 4,797. The town was founded by Chandel Rājputs and was formerly called Idrasī or Indrasi. It subsequently received the name of Mungāvali or Mungaolī after Munga Shāh, a Muhammadan saint who lived here. At Mirkābād, one mile distant, is a settlement for members of the Moghia criminal tribe. The export of grain from the town has increased since the opening of the Bīna-Bāran branch of the Great Indian Peninsula Railway, but the want of feeder roads in the neighbourhood makes any material improvement impossible. A municipality was constituted in 1904. Besides the usual offices, a school with a boarding-house, another special school for Moghias, a district jail, a hospital, a State post office, and a police station are located in the town.

Mungelī Tahsīl.—Western *tahsīl* of Bilāspur District, Central Provinces, lying between 21° 53′ and 22° 40′ N. and 81° 12′ and 82° 2′ E. In 1901 its area was 1,794 square miles, and the population was 255,054. On the formation of the new Drug District, the portion of the *tahsīl* south of a line drawn from the north-east corner of Kawardhā State to the junction of the Agar and Seonāth rivers was transferred to the Bemetāra *tahsīl* of that District. The revised area and population of the Mungelī *tahsīl* are 1,452 square miles and 177,116 persons. The population of the same area in 1891 was 248,740. The density is 122 persons per square mile. The *tahsīl* contains one town, MUNGELĪ (population, 5,907), the head-quarters; and 878 inhabited villages. It includes the *zamīndāri* estates of Pandariā and Kantelī, with an area of 512 square miles and a population of 53,937. Of the *zamīndāris*, 263 square miles are covered with tree and scrub forest. The land revenue demand in 1902–3 on the area now constituting the *tahsīl* was approximately 1·18 lakhs. The *tahsīl* has 410 square miles of Government forest, and also contains a tract of black soil and the ordinary rice land of Chhattīsgarh. The open country is noticeably bare of trees.

Mungelī Town.—Head-quarters of the *tahsīl* of the same name in Bilāspur District, Central Provinces, situated in 22° 4′ N. and 81° 41′ E., on the Agar river, 31 miles west of Bilāspur town by road. Population (1901), 5,907. The town is increasing in importance, and is the centre of trade for most of the Mungelī *tahsīl*. Grain is generally sent to Bhātāpāra station, 32 miles distant. A station of the American Unsectarian Mission, called the Disciples of Christ, has been established at Mungelī, which supports a leper asylum, a dispensary, and schools. The Government institutions comprise a dispensary, a vernacular middle school, and a girls' school. Sanitation is provided for by a small fund raised from the inhabitants.

Mungīr.—District, subdivision, and town in Bengal. *See* MONGHYR.

Mungledye.—Subdivision of Darrang District, Eastern Bengal and Assam. *See* MANGALDAI.

Mūngrā-Bādshāhpur.—Town in the Machhlīshahr *tahsīl* of Jaunpur District, United Provinces, situated in 25° 40′ N. and 82° 12′ E., on the Oudh and Rohilkhand Railway, and on the road from Jaunpur city to Allahābād. Population (1901), 6,130. The town is said to have been founded by Ibrāhīm Shāh of Jaunpur. On the cession of the Benares province to the British, it became a customs post and trade centre between Oudh and Benares. It is still a mart for the import of cotton from Allahābād and for the export of sugar. Mungrā-Bādshāhpur is administered under Act XX of 1856, with an income of about Rs. 1,400. There is a primary school with 75 pupils.

Munjpur.—Petty State in KĀTHIĀWĀR, Bombay.

Munmār.—Town in Nāsik District, Bombay. *See* MANMĀD.

Munshiganj Subdivision.—South-eastern subdivision of Dacca District, Eastern Bengal and Assam, lying between 23° 14′ and 23° 41′ N. and 90° 10′ and 90° 42′ E., with an area of 386 square miles. The subdivision is a fertile alluvial tract, bounded on three sides by large rivers, the Padmā on the south, the Meghnā on the east, and the Dhaleswarī on the north. The population in 1901 was 638,351, compared with 581,051 in 1891. It contains 978 villages, but no town; the head-quarters are at MUNSHIGANJ. This subdivision, which contains the greater part of the old BIKRAMPUR *pargana*, is one of the most thickly populated rural tracts in India, having a density of 1,654 persons per square mile. The principal centres of trade are Munshiganj, near which a large annual fair, known as the Kārtik Bāruni *mela*, is held for a month in December and January, Bhāgyakūl, Lohajang, and Mirkādim.

Munshiganj Town.—Head-quarters of the subdivision of the same name in Dacca District, Eastern Bengal and Assam, situated in 23° 33′ N. and 90° 32′ E., on the banks of the Meghnā. Population (1901), 964. The station possesses the usual public offices; the sub-jail has accommodation for 17 prisoners. Munshiganj has been identified as the site of the ancient Idrakpur. The Kārtik Bāruni *mela* is a large commercial gathering held on the banks of the Dhaleswari in December and January. It used to be the great centre from which traders in neighbouring Districts took their supplies, and is still largely attended; but its importance has declined now that the steamers have brought almost every village on the banks of the large rivers into touch with Calcutta.

Murādābād.—District, *tahsīl*, and city in the United Provinces. *See* MORĀDĀBĀD.

Murār.—Cantonment in Gwalior State, Central India. *See* MORĀR.

Murbād.—South-eastern *tāluka* of Thāna District, Bombay, lying

between 19° 7′ and 19° 27′ N. and 73° 23′ and 73° 48′ E., with an area of 350 square miles. It contains 171 villages, Murbād being the head-quarters. The population in 1901 was 62,569, compared with 65,641 in 1891. The density, 179 persons per square mile, is below the District average. Land revenue and cesses in 1903-4 amounted to more than 1·3 lakhs. The people are mostly Thākurs, Kolīs, and Marāthās. Most of the *tāluka* is very hilly and fairly wooded. The soil is poor and the uplands of little value, except as supplying brushwood for manure. It suffers from the want of means of exporting its produce, but a good high road now bisects it. The water supplied by wells is fairly good but scanty. The climate is oppressive, though not unhealthy; after the rains, however, it is malarious.

Murgod.—Village in the Parasgad *tāluka* of Belgaum District, Bombay, and head-quarters of the Murgod *mahāl* or petty division, situated in 15° 53′ N. and 74° 56′ E., 27 miles east of Belgaum town. Population (1901), 5,655. Murgod is a considerable market for cotton and grain, and some business is done in printing cotton cloth. A small fair lasting for six days is held annually, in honour of Chitāmbareshwar, at the temple of Mallikārjun. In 1565, after the battle of Tālikotā, Murgod was taken by Vitta Gauda, the ancestor of the present Sar Desai of Sirsangi. After his death it was held by Sivajī. The village contains one boys' and one girls' school, attended by 18 and 12 pupils respectively.

Murree Tahsīl.—Northern *tahsīl* of Rāwalpindi District, Punjab, lying between 33° 42′ and 34° 1′ N. and 73° 12′ and 73° 36′ E., with an area of 258 square miles. It is bounded on the east by the Jhelum river, which cuts it off from Kashmīr territory. The *tahsīl* is composed of three main spurs, running north and south, with intervening valleys and connecting ridges. The most westerly is the Murree spur, which rises to 7,517 feet above the sea, the highest point in the District. The higher hills are thickly wooded with pine and fir, while the lower slopes bear a plentiful growth of oak, acacia, &c. The population in 1901 was 52,303, compared with 45,772 in 1891. The hill station of MURREE is the *tahsīl* head-quarters, and it also contains 120 villages. The land revenue and cesses in 1903-4 amounted to Rs. 16,000.

Murree Town.—Hill sanitarium and head-quarters of the *tahsīl* of the same name in Rāwalpindi District, Punjab, situated in 33° 55′ N. and 73° 23′ E., 39 miles from Rāwalpindi town, on a spur of the Himālayas, at the height of 7,517 feet above sea-level. The population in March, 1901, was 1,844, but in the summer it probably amounts to over 10,000. In the hot season it is the head-quarters of the Lieutenant-General of the Northern Command. The Commissioner of the Rāwalpindi Division and the Deputy-Commissioner of Rāwalpindi also reside here during part of the hot season, for which period an Assistant Com-

missioner is placed in charge of the subdivision consisting of the Murree *tahsīl*. The site was selected in 1850 almost immediately after the annexation of the Province, and building operations commenced at once. In 1851 temporary accommodation was provided for a detachment of troops; and in 1853 permanent barracks were erected. The garrison generally consists of three mountain batteries. In 1873, 1874, and 1875 Murree was the summer head-quarters of the Punjab Government. It is connected with Rāwalpindi town by a service of tongas. The houses crown the summit and sides of an irregular ridge, commanding magnificent views over forest-clad hill-sides into deep valleys studded with villages and cultivated fields. The neighbouring hills are covered during the summer with encampments of British troops, while the station itself is filled with European visitors from the plains and travellers to Kashmīr. A fine view of the snowy peaks of Kashmīr is to be had on a clear day, and the crest of Nanga Parbat (26,182 feet) can sometimes be seen. The municipality was created in 1850. The income during the ten years ending 1902–3 averaged Rs. 49,500, and the expenditure Rs. 48,200. In 1903–4 the income and expenditure were Rs. 51,400, chiefly from octroi, and Rs. 54,400 respectively. The income and expenditure of cantonment funds averaged Rs. 10,000 between 1893 and 1903. The chief educational institutions are the Lawrence Military Asylum for soldiers' children, and the St. Denys' and Convent English schools for girls. The station contains the Lady Roberts Home for invalid officers and a branch of the Alliance Bank of Simla. The Murree Brewery is the only industrial concern of any importance.

Mursān.—Estate situated in the Alīgarh, Muttra, and Etah Districts of the United Provinces, with an area of 60 square miles. The demand for land revenue in 1903–4 was a lakh and for cesses Rs. 16,000, while the rent-roll was 2·1 lakhs. This is the most important Jāt estate in the United Provinces. In the sixteenth or seventeenth century a Jāt, named Makan, came from Rājputāna to the neighbourhood of Mursān town, and he and his descendants acquired considerable estates, partly by clearing waste land. The result was the formation of a number of *talukas* or baronies, linked together by the kinship of the owners. Nand Rām, head of the clan, submitted to Aurangzeb, when the latter had firmly established himself, and was appointed an administrative official. He died in 1695, leaving fourteen sons, the eldest of whom was called Zulkaran, and predeceased his father. The Jāt possessions were divided among the other children of Nand Rām; but Zulkaran's son, Khushāl Singh, who obtained only two villages, attracted the notice of Saādat Khān, Nawāb of Oudh, and was granted the farm of other property. In 1749 he was succeeded by Puhup Singh, who largely increased the estates he had inherited by obtaining from the *āmils* leases of villages which had fallen out of cultivation, or in which arrears of revenue were

due. He also acquired a considerable share in the *talukas* left by Nand Rām, though dispossessed for a time by Sūraj Mal, Rājā of Bharatpur, and was the first of the family to assume the title of Rājā. In 1803 Bhagwant Singh, son of Puhup Singh, was allowed to engage for payment of revenue of all the estates held by him, without any detailed inquiry into their internal circumstances, and retained some independent judicial authority. He also received a *jāgīr* for services rendered in Lord Lake's campaign. A few years later both Bhagwant Singh and Dayā Rām, *talukdār* of Hāthras, another descendant of Nand Rām, came into conflict with the authorities for persistent default in the payment of revenue and defiance of the courts, and in 1817 troops were sent against them. Dayā Rām at first resisted, and on the fall of Hāthras his estates were confiscated; but Bhagwant Singh surrendered. He was treated leniently, and his possessions were not escheated, though his special police jurisdiction was cancelled. On his death in 1823 the process of direct engagement with the village proprietors was commenced, and his son, Tīkam Singh, lost considerably. The separation of subordinate rights was completed in the first regular settlement, and was resisted in the courts by the Rājā, but without success. Owing to his loyalty in the Mutiny, Rājā Tīkam Singh received an abatement of Rs. 6,000 in his assessment, and was also created C.S.I. The present owner of the estate is Rājā Dat Prasād Singh, who succeeded a grandson of Tīkam Singh in 1902.

The principal place in the estate is Mursān, a small town on the Cawnpore-Achhnerā Railway, with a population (1901) of 4,395, which is administered under Act XX of 1856. A primary school here is attended by 120 pupils.

Murshidābād District.—District of the Presidency Division, Bengal, lying between 23° 43′ and 24° 52′ N. and 87° 49′ and 88° 44′ E., with an area of 2,143 square miles. In shape it resembles an isosceles triangle with its apex pointing to the north-west. The northern and eastern boundaries are formed by the Padmā, or main stream of the Ganges, which separates it from Mālda and Rājshāhi; on the south-east the Jalangī divides it from Nadiā; on the south it is bounded by Burdwān; and on the west by Bīrbhūm and the Santāl Parganas.

Physical aspects.

The Bhāgīrathi, which flows with many windings south-east and south, divides the District into two tracts nearly equal in size but differing in their physical features. The country to the west of the Bhāgīrathi, known as Rārh, forms a continuation of the Chotā Nāgpur plateau; its general level is slightly undulating and higher than that of the rest of the District, but it is interspersed with marshes and seamed by hill torrents. The Bāgri or eastern portion forms part of the old Ganges delta, and its river system consists of the PADMĀ with its distributaries, the BHĀGĪ-

RATHI, BHAIRAB, Siālmāri, and JALANGĪ. The Bhāgīrathi, which forms the oldest known outlet of the Ganges and marks the western limit of the delta, has undergone great changes even in the last hundred years; its head has almost silted up, and it is with difficulty kept open for navigation by small boats during the dry season. Its chief tributaries are the Bānsloi and the Pāgla, which rise in the Santāl Parganas, the Chorā Dekrā, and the Dwārka. The Dwārka or Bābla is a continuation of the Brāhmanī, which rises in the Bīrbhūm hills, and after uniting with the Mor flows eastwards through the Kāndi subdivision to join the Bhāgīrathi; like all hill streams, it is very rapid and liable to sudden flood. The Bhairab and Siālmāri are unimportant streams flowing into the Jalangī; this river has a general trend to the south-west and eventually joins the Bhāgīrathi in Nadiā District. There are many small lakes, the largest being the Telkar Bīl west of Berhampore, which is about 3 miles long and 2¾ miles broad, and a large horseshoe lake known as Motijhīl, which has been formed about 2 miles from MURSHIDĀBĀD TOWN by a change in the course of the Bhāgīrathi.

The portion of the District east of the Bhāgīrathi is covered with recent alluvium, consisting of sandy clay and sand along the course of the rivers, and fine silt consolidating into clay in the flatter parts of the river plain. The limit between the alluvium and the higher ground on the west is marked by a bank of stiff clay, gravel, and nodular limestone, which disappears as it passes downwards towards Bīrbhūm, where it amalgamates with the general alluvium. In the north-west of the District are some isolated clay hillocks.

The stretches of low-lying land under rice cultivation afford a foothold for many marsh species, while the numerous ponds and ditches are filled with submerged and floating water-plants. Remarkable among these for its rarity, and interesting on account of its distribution in Europe on the one hand and Australia on the other, is the floating *Aldrovanda vesiculosa*. The edges of sluggish creeks are lined with large sedges and bulrushes, and the banks of rivers have a hedge-like scrub jungle. The sides of embankments and village sites, where not occupied by habitations, are densely covered with shrubberies of semi-spontaneous species, interspersed with clumps of planted bamboos and groves of *Areca*, *Moringa*, *Mangifera*, and *Anona*, while banyan (*Ficus indica*), *pīpal* (*Ficus religiosa*), *babūl* (*Acacia arabica*), jack (*Artocarpus integrifolia*), *bel* (*Aegle marmelos*), plantain, and date trees are also common. Waysides and waste places are filled with grasses and weeds, usually of little intrinsic interest, but often striking because of their distribution. Many of them have been inadvertently introduced by human agency, and include European or African and American species, which spread more plentifully than similar weeds of indigenous origin. The District is famous for its mangoes.

Big game has disappeared before the advance of cultivation, but leopards are occasionally met with and wild hog still abound in the jungles.

During the hot season dry westerly winds alternate with the southerly sea-breezes of moderate temperature which characterize other parts of Lower Bengal; and the mean temperature, which is 79° for the whole year, rises from 65° in January to 88° in April, when the mean maximum is 100°. The mean minimum is lowest (53°) in January. The annual rainfall averages 53 inches, of which 9·6 fall in June, 11 in July, 10 in August, and 9 in September.

The earthquake of 1897 caused great damage, especially along the banks of the Bhāgīrathi river, where the old masonry buildings in the riparian towns suffered enormously. The cost of repairs to public property was estimated to exceed 2 lakhs, and the damage to private property at 50 lakhs. Discharges of water and black mud occurred from the bed of the Bhāgīrathi near Jangipur, and sand and water were also thrown up from fissures in the marshy land near Gaur and Jalangī, one fissure extending for a length of 2 miles. The District is liable to annual inundation, and serious floods are only prevented by numerous and expensive embankments. In 1870 the embankments of the Bhāgīrathi were breached, and a disastrous flood occurred which destroyed the crops over a large area and caused great suffering. In 1886 the town of Murshidābād was inundated and thousands of people left destitute. The Dwārka is liable to sudden floods; and a tract of low-lying country about 16 miles in extent at the confluence of the Mor and Dwārka rivers in the Kāndi subdivision, known as Hejāl, is inundated more or less heavily almost every year.

History.

In ancient times the Bhāgīrathi formed an important political boundary. To the east lay BANGA or Samatata and to the west KARNA SUVARNA, whose capital was probably at or near RĀNGĀMĀTI. Under the Sen kings the river separated the RĀRH from the BĀGRI division of Bengal, traces of which remain in the name Bāgdi. The country was conquered in 1197 by Muhammad i-Bakhtyār Khiljī, and formed part of the dominions of the Muhammadan kings of Gaur. In the middle of the seventeenth century factories were founded at Cossimbazar, at that time the head-quarters of the silk trade; but the political importance of the District dates from the early part of the eighteenth century, when Murshid Kulī Khān moved the seat of government from Dacca to the little town of Maksūdābād, thenceforth called after him, where he built a palace. Historical interest centres in MURSHIDĀBĀD, COSSIMBAZAR, and BERHAMPORE. Other places of archaeological importance are Badrihāt and Rāngāmāti. When a Collector was first appointed to the charge of the District in 1772, its area extended over the neighbouring *zamīndāris*

of Bīrbhūm and Bishnupur. These outlying tracts had always been noted for lawlessness; and for the better administration of justice they were finally severed from Murshidābād in 1787. The District was thus reduced to about its present size, but the irregularity of the boundary between it and Bīrbhūm has been a constant source of perplexity to the local officials. In 1875 the District was transferred from the Rājshāhi to the Presidency Division.

Population.

The population, which in 1872 numbered 1,214,104, increased to 1,226,790 in 1881, to 1,250,946 in 1891, and to 1,333,184 in 1901. The increase between 1872 and 1891 was very small, owing to the ravages of the 'Burdwān fever,' which devastated not only the low-lying waterlogged eastern tracts but also the elevated country to the west. In recent years there has been a great improvement in the health of the District, especially in the Rārh country. To the east, however, the climate is damp, and malaria is still prevalent; cholera is rarely absent, and enlargement of the spleen and liver is almost universal. Elephantiasis and hydrocele are endemic. The table below gives statistics of the population by subdivisions in 1901:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Berhampore .	752	1	1,060	471,962	628	+ 3·7	22,853
Lālbāgh . .	370	2	632	192,978	522	+ 6·2	11,292
Jangipur . .	509	1	1,093	334,191	657	+ 5·4	16,955
Kāndi . . .	512	1	883	334,053	652	+ 12·4	22,376
District total	2,143	5	3,668	1,333,184	622	+ 6·6	73,476

The towns are BERHAMPORE, the head-quarters, MURSHIDĀBĀD, AZĪMGANJ, JANGIPUR, and KĀNDI. The alluvial tract to the east of the Bhāgīrathi is much more densely populated than the west of the District. In the latter tract, however, the population is now growing rapidly, the increase at the Census of 1901 amounting to 12·9 per cent., compared with 3·1 per cent. in the east of the District, and rising as high as 26 per cent. in the Sāgardīghi and Kaliānganj *thānas*, which are still sparsely populated and attract a large number of immigrants from Bīrbhūm and the Santāl Parganas. The District suffers from diluvion along the northern boundary, and there has consequently been some loss of inhabitants by migration to the corresponding alluvial formations in Mālda and Rājshāhi on the other side of the Padmā. There is a good deal of temporary immigration from Bihār and the United Provinces, especially during the winter months. The

vernacular of the District is the dialect known as Central Bengali. Muhammadans (676,899) in 1901 outnumbered the Hindus (643,474), having increased from 48·1 per cent. of the population in 1881 to 50·8 per cent. in the latter year. Hindus, however, still predominate to the west of the Bhāgīrathi.

Most of the Muhammadans are Shaikhs (628,000). Among the Hindus the most numerous castes are Kaibarttas (95,000); Bāgdis (40,000), chiefly in the south-west; Sadgops (39,000), chiefly in the southern *thānas*; Chains (38,000), along the south-east; Brāhmans, Ahīrs, and Goālās. Agriculture supports 58 per cent. of the population, industries 19·3 per cent., commerce 0·6 per cent., and the professions 1·8 per cent.

Christians number only 391, of whom 249 are natives. Various missions have established themselves in the District from time to time, but they have not met with much success. The only one now is a branch of the London Missionary Society, which began work in 1824.

Agriculture.

The low-lying alluvial soil to the east is very fertile; the chief crop is the autumn rice, but it also grows several important cold-season crops. On the hard clay of the Rārh tract *āman* or winter rice is the main staple, though sugar-cane, mulberry, tobacco, and various vegetables are likewise grown.

The chief agricultural statistics for 1903–4 are shown below, areas being in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Berhampore . .	752	346	195
Lālbāgh . .	370	205	17
Jangipur . .	509	281	31
Kāndi . .	512	332	174
Total	2,143	1,164	417

It is estimated that 30 per cent. of the cultivated area is twice cropped. Rice is grown over an area of 723 square miles, the winter rice covering 34 per cent. of the net cropped area against 28 per cent. under autumn rice. About 167 square miles are under wheat and 95 square miles under barley. Other crops extensively cultivated are gram and other pulses and oilseeds, linseed and mustard being the most important kinds. Jute, sugar-cane, indigo, and mulberry are grown, but the cultivation of both indigo and mulberry is now declining. Little use is made of the Agriculturists' Loans Act; in the two years ending 1898 Rs. 40,000 was advanced.

Pasture land is plentiful all over the District. The chief grazing ground is a tract of low country in the Kāndi subdivision, about 16 miles in area, known as Hejāl; this is covered with water during

the rains, but in the dry season it affords splendid pasturage. Cattle fairs are held at Pānchamdī and Tālibpur in the Kāndi subdivision, and occasionally at Bhābta in the head-quarters subdivision.

The necessity for irrigation is limited to the west of the District, where water is conducted over the fields from tanks or natural water-courses. A large number of tanks are used for this purpose in the Manigrām Government estate.

Fisheries.

Pearl fisheries exist in a series of lakes which mark the line of an old river and stretch from the Gobrā nullah to Rukimpur, a distance of about 38 miles. The mussel in which the pearls are found is a species of *Unio*, and is probably a variety of the pearl-bearing *Unio margaritifera*. The majority of the pearls are seed pearls, and they have usually a golden tint. Valuable pearls are occasionally procured, fetching as much as Rs. 200 each; but such a find is very rare, and the largest pearls found in recent years rarely exceed Rs. 15 or Rs. 30 in value. The fishery season is in the hot months, when the water is low and almost stagnant. The various branches of the industry furnish employment for about 300 persons during this period, and its annual value is estimated at Rs. 3,000.

Iron is found, but not in sufficient quantities to repay smelting. Calcareous earth occurs in several places and is extensively used for making lime. *Kankar* or nodular limestone crops up generally over the western half of the District, and is used for road-making.

Trade and communications.

The silk industry in this part of Bengal is of great age, and the silk trade is one of the earliest of the industries which occupied the servants of the East India Company in the District, their efforts being stimulated by competition with the French, Dutch, and Armenians. Silk factories date from the middle of the seventeenth century, when Cossimbazar was the most important centre. The winding of silk is still carried on, but it has steadily declined since the Company closed their factory at Jangipur in 1835. The decline is due in a great measure to diseases of the worms, which the Bengal Silk Association, constituted in 1898, is now taking steps to combat. There is a nursery at Chandanpur which distributes large quantities of selected seed to the rearers; similar nurseries are being built at Rājdharpur and Kumārpur, and the use of examined seed is spreading in the Government estates west of the Bhāgīrathi.

Silk is still largely manufactured in the head-quarters and Jangipur subdivisions; a great variety of fabrics are manufactured. The best silks are those produced in the Mirzāpur, Hariharpāra, and Daulat Bāzār *thānas*; in 1903–4 the Mirzāpur weavers turned out 26,000 yards of silk cloth, valued at Rs. 33,000. In addition to the native artisans working with hand-looms, there were in that year 54 factories worked with machinery which had an out-turn of 396,000 lb., valued at nearly

27 lakhs, the principal firms being Messrs. Louis Payen & Co. and the Bengal Silk Company. *Tasar* and *matkā* silks are also manufactured, the latter being best prepared by Indian weavers on their hand-looms. Cotton-weaving with hand-looms is still an important occupation, and silk and cotton dyeing are carried on by a few families at Khagrā Bāluchar and Mirzāpur. Murshidābād town has skilled embroiderers, who adorn clothes, gloves, slippers, and caps with gold and silver lace. Gold and silver wire is also made in small quantities. *Bidri* ware is produced by a few workmen at Murshidābād; the process consists in inlaying with silver a sort of pewter which is blackened with sulphate of copper. Bell-metal and brass utensils of a superior kind are manufactured in large quantities at Khagrā, Berhampore, Kāndi, and Baranagar; these articles are sold in the local markets and are also exported. Locks, nails, and betel-nut cutters are made at Dhuliān. Ivory-carving was formerly a considerable industry, but is now confined to a few workmen at Murshidābād. Blankets, shell bracelets, and pottery are manufactured in a few villages, and musical instruments and *hukka* pipes are also made. The indigo industry has practically disappeared, the out-turn in 1903–4 having fallen to 13 tons.

The external trade is mainly with Calcutta. The chief imports are European piece-goods, salt, coal and coke, and kerosene oil; and the chief exports are rice, wheat, gram, oilseeds, jute, silk, indigo, and metal ware. The District is favourably situated for trade, being served by two offshoots of the Padmā, the Bhāgīrathi and the Jalangī, which form the Hooghly and lead direct to Calcutta. The principal seats of trade are JANGIPUR, AZĪMGANJ, JIĀGANJ, Khagrā, and DHULIĀN on the Bhāgīrathi, and BHAGWĀNGOLĀ on the Ganges. Trade is carried on chiefly at permanent markets, and periodical fairs are also held at Dhuliān, Jangipur, Chaltiā, Suktipur, and Kāndi. The Jain merchants of Azīmganj are among the richest traders in Bengal.

The little railway from Nalhāti to Azīmganj runs for about 14 miles within the District. The Murshidābād branch of the Eastern Bengal State Railway, which has recently been opened, leaves the main line at Rānāghāt and enters the District near Plassey, whence it runs nearly due north through Beldānga, Berhampore, Murshidābād, and Jiāganj to Lālgolā. There is also a proposal to bridge the Bhāgīrathi between Jiāganj and Murshidābād, and to connect the new line with the East Indian Railway system. The District board maintains 33 miles of metalled and 526 miles of unmetalled roads, with 335 bridges and 22 ferries. The most important roads are those connecting Berhampore, the head-quarters station, with Krishnagar, Bhagwāngolā, Patkabāri, Kāndi, and Jalangī; Murshidābād with Pānchgrām; and Jarur with Gāmbhīra.

Steamer services ply up the Padmā from Goalundo throughout the

year, and the other big rivers are navigable by large country boats, except during the latter part of the dry season; for the rest of the year the Calcutta Steam Navigation Company maintains a regular steamer service up the Bhāgīrathi from Calcutta. The measures which have been taken from time to time to keep this river and the Jalangī open for traffic are described in the article on the NADIĀ RIVERS. In 1903-4 about Rs. 41,000 was realized as tolls, while the expenditure in keeping the channels open amounted to Rs. 44,000.

Famine.

The famine of 1770 is believed to have carried off three-eighths of the population of this District. In 1870 some distress was caused by high prices, and severe scarcity was felt in 1874 and 1897. On the latter occasion Government expended Rs. 73,000 on famine relief, and was aided by the munificence of local *zamīndārs* headed by the late Mahārānī Sarnamayī, C.I. The aggregate number of units relieved, reckoned in terms of one day, was 454,000.

Administration.

For administrative purposes the District is divided into four subdivisions, with head-quarters at BERHAMPORE, JANGIPUR, KĀNDI, and LĀLBĀGH. The Magistrate-Collector is assisted at head-quarters by a staff of four Deputy-Magistrate-Collectors and occasionally by a Joint or Assistant Magistrate. The subdivisional officers at Kāndi, Lālbāgh, and Jangipur belong to the Provincial service recruited in India, and are assisted by Sub-Deputy-Collectors. The Executive Engineer in charge of the Nadiā Rivers division is stationed at Berhampore.

Subordinate to the District and Sessions Judge for the disposal of civil judicial work are a Subordinate Judge at head-quarters and seven Munsifs, of whom two each are stationed at Berhampore, Jangipur, and Kāndi, and one at Lālbāgh. The criminal courts include those of the Judge, the District Magistrate, and the above-mentioned magistrates. The most common offences are those which arise out of disputes about land.

In Todar Mal's rent-roll of 1582 the present District area formed portion of Audambar or Tānda, Sātgaon, and other *sarkārs*. In Jafar Khān's settlement of 1722 the name Murshidābād was applied to an area apparently coextensive with the great *zamīndāri* of Rānī Bhawāni, properly known as Rājshāhi. It is therefore impossible to compare the present land revenue of the District with that realized under Muhammadan rule. The whole of the District is permanently settled, with the exception of 72 temporarily settled estates with a current demand of Rs. 30,000, and 64 estates with a demand of Rs. 26,000 held direct by Government. The average incidence of rental is Rs. 3-1-5 per cultivated acre; but rents differ widely in various parts, being lowest in the head-quarters and Jangipur subdivisions, and highest in

the Kāndi subdivision, where rice and wheat lands bring in from Rs. 7-8 to Rs. 18, and mulberry and sugar-cane lands from Rs. 12 to Rs. 24 per acre. In the head-quarters subdivision, on the other hand, the rent of rice and wheat lands ranges between Rs. 1-2 and Rs. 9, that of land growing pulse between Rs. 2-4 and Rs. 3, sugar-cane land between Rs. 3 and Rs. 7-8, and mulberry land between Rs. 1-12 and Rs. 12 per acre.

The *utbandi* system of tenure is very common, especially in the Plassey *pargana*; for a description of this tenure see the article on NADIĀ DISTRICT. *Aimmās* or quit-rent tenures are numerous in the Fateh Singh estate. The average area of a tenant's holding is only one acre.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees:—

	1880-1*.	1890-1.	1900-1.	1903-4.
Land revenue . . .	13,05	10,68	10,66	10,67
Total revenue . . .	18,12	16,23	17,78	17,95

* Between 1880-1 and 1890-1, certain estates were transferred from Murshidābād to other Districts.

Outside the municipalities of BERHAMPORE, AZĪMGANJ, JANGIPUR, KĀNDI, and MURSHIDĀBĀD, local affairs are managed by the District board, with subordinate local boards in each subdivision. The income of the District board in 1903-4 was Rs. 1,27,000, of which Rs. 64,000 was derived from rates. The expenditure was also Rs. 1,27,000, including Rs. 69,000 spent on public works and Rs. 25,000 on education. A scheme for supplying the rural areas with drinking-water is in progress; this was initiated by a gift of a lakh from Rājā Jogendra Nārāyan Rao of Lālgolā.

There are 74 miles of embankments along the Bhāgīrathi, under the Public Works department, to prevent the country on the east bank from being flooded by the spill of the river. The propriety of maintaining these embankments has been called in question, on the ground that the land which would otherwise be flooded is thereby deprived of its supply of fertilizing silt, while the river, being confined to its bed, deposits its silt there, and thus gradually raises itself above the level of the surrounding country.

Murshidābād contains 24 police stations and 26 outposts; and in 1903 the force subordinate to the District Superintendent consisted of 4 inspectors, 53 sub-inspectors, 51 head constables, and 675 constables. In addition, there is a rural police of 264 *daffadārs* and 2,947 *chaukīdārs*. The District jail at Berhampore has accommodation for 340 prisoners, and subsidiary jails at the three subdivisional outstations have accommodation for 62.

In spite of the proximity of the District to Calcutta, only 5·5 per cent. of the population (10·6 males and 0·6 females) could read and write in 1901. The total number of pupils under instruction increased from 12,000 in 1883 to 22,994 in 1892–3, and 24,837 in 1900–1. In 1903–4, 24,015 boys and 1,531 girls were at school, being respectively 24·5 and 1·5 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 661, including one Arts college, 58 secondary, 582 primary, and 20 special schools. The expenditure on education was 2·17 lakhs, of which Rs. 44,000 was met from Provincial funds, Rs. 25,000 from District funds, Rs. 2,000 from municipal funds, and Rs. 84,000 from fees. The principal institutions are the college and Sanskrit *tol* at Berhampore, and the Nawāb's *madrasa* and high school at Murshidābād. The London Missionary Society maintains a high school at Khagrā near Berhampore.

In 1903 the District contained 7 dispensaries, of which 5 had accommodation for 115 in-patients. The cases of 65,000 out-patients and 1,335 in-patients were treated during the year, and 3,320 operations were performed. The expenditure was Rs. 27,000, of which Rs. 2,000 was met by Government contributions, Rs. 3,000 from Local and Rs. 11,000 from municipal funds, and Rs. 3,000 from subscriptions. The hospital at Kāndi, which is maintained from an endowment fund, now amounting to 1·59 lakhs, left by Kumār Giris Chandra Sinha of Paikpāra, is the best equipped in the District. There is a lunatic asylum at Berhampore.

Vaccination is compulsory only in the municipal towns. In 1903–4 the number of successful vaccinations was 37,000, representing 36 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. iii (1876); Beveridge, 'Note on the Parganas of Murshidābād,' *Proceedings of the Asiatic Society* (1892); Major Walsh, I.M.S., *History of Murshidābād* (1902); G. C. Dutt, *Monograph on Ivory Carving in Bengal* (Calcutta, 1901); N. G. Mukerjī, *Monograph on the Silk Fabrics of Bengal* (Calcutta, 1903); P. C. Majumdar, *The Musnud of Murshidābād* (Murshidābād, 1905).]

Murshidābād Subdivison.—Subdivision of Murshidābād District, Bengal. *See* LĀLBĀGH.

Murshidābād Town.—Head-quarters of the Lālbāgh subdivision of Murshidābād District, Bengal, situated in 24° 12′ N. and 88° 17′ E., on the left bank of the Bhāgīrathi. The town, which possesses great historical interest, was formerly known as Makhsūsābād or Maksūdābād, and is stated by Tieffenthaler to have been founded by the emperor Akbar. In 1696 the Afghāns from Orissa in the course of their rebellion defeated the imperial troops and plundered the place. In 1704

Nawāb Murshid Kulī Khān moved the seat of government from Dacca to Maksūdābād, which he then called, after himself, Murshidābād; the old name, however, still lingers, and the spelling Muxudavad is found in the early English records as late as 1760. Tradition relates that Murshid Kulī Khān moved his government to this place through fear of prince Azīm-ush-shān, who had attempted to assassinate him at Dacca. It seems more probable that he was induced to do so by political considerations. Dacca had lost its importance, for the Maghs and the Portuguese were no longer dangerous; and the banks of the Bhāgīrathi afforded a more central position for the management of the three provinces of Bengal, Bihār, and Orissa. The new city was also situated on the main line of communication between the Upper Ganges valley and the sea, along which the treasures of India were now beginning to find their way to the European settlements on the Hooghly; and it commanded the town of Cossimbazar, where all the foreigners had important factories. Moreover, the situation in those days was regarded as very healthy. Murshid Kulī Khān, by birth a Brāhman and by education a courtier, was one of the most able administrators that ever served the Mughal empire in time of peace. Second only to the Nawāb in establishing the importance of Murshidābād was the Jain banker, Mānik Chānd Jagat Seth, by whose predominating influence as a financier the residence of the governor became also the centre of the revenue collections for Bengal, Bihār, and Orissa.

The dynasty founded by Murshid Kulī Khān did not continue in the direct line beyond two generations. Alī Vardi Khān won the governorship by conquest in 1740. Troublous times followed; in 1742 Marāthā invaders sent by the Bhonsla Rājā of Berār plundered the suburbs of Murshidābād and obtained a booty of 3 lakhs from Jagat Seth. In the next year two separate armies of Marāthās came, and Alī Vardi avoided battle only by playing off one chief against the other, and at last got rid of the stronger by paying a large sum of money. From this date till 1751, when he ceded to the Marāthās the province of Orissa and agreed to pay an annual tax of 12 lakhs, Alī Vardi was continually pressed by both the Marāthās and the Afghāns. He was succeeded in 1756 by his grandson Sirāj-ud-daula, who in the following year captured the English factory at Cossimbazar. During this period the city itself never suffered either from domestic or foreign war. Each successive prince, after the Eastern fashion, built for himself one or more new palaces; and the great family of Jagat Seth preserved their position as State bankers from generation to generation. On entering Murshidābād after the victory of Plassey, Colonel Clive wrote:—

'This city is as extensive, populous, and rich as the city of London, with this difference, that there are individuals in the first possessing infinitely greater property than in the last city.'

Even after the conquest of Bengal by the British, Murshidābād remained for some time the seat of administration. Plassey was fought in 1757, just beyond the present southern limits of Murshidābād District; but that battle was not regarded at the time as interfering with the Muhammadan government, beyond the substitution of a subservient Nawāb for the savage Sirāj-ud-daula. The only apparent result was that the Commercial Chief of the factory at Cossimbazar was superseded by a Political Resident to the Darbār, who took up his quarters nearer the city, at Motijhīl ('the pearl lake'), in the palace of a former Nawāb. In 1765 the East India Company received the grant of the Dīwāni or financial administration of Bengal, Bihār, and Orissa from the Mughal emperor, Shāh Alam, as the prize of the victory at Buxar; and in the following year Lord Clive, as Governor of Bengal, presided in person at the *punyā* or annual settlement of the revenues. But even on this occasion the young Nawāb sat on the *masnad*, with the Governor on his right hand. The entire work of government still remained, without serious check or supervision, in the hands of the Muhammadan officials; and Jagat Seth continued to be the State banker. The first great reform was effected in 1772 by Warren Hastings, who removed the supreme civil and criminal courts from Murshidābād to Calcutta. After an experience of three years, the tribunal of criminal justice was retransferred to Murshidābād; and it was not till 1790, under Lord Cornwallis, that the entire revenue and judicial staff was ultimately fixed at the present capital of India. The mint was abolished in 1799. About the same date, the civil head-quarters of the District were transferred to Berhampore, which had been from the first the site of the military cantonment. Murshidābād city was thus left only as the residence of the Nawāb Nāzim, a descendant of Mīr Jafar, who till 1882 retained certain marks of sovereignty within his palace, and received a pension of 16 lakhs a year. The last holder of the title was for many years resident in England. On his return to India, he abdicated his position in favour of his son, who succeeded him, but without any sovereign rights, and on a diminished pension. The title of the present descendant of the once independent rulers of Bengal, Bihār, and Orissa is now simply that of Nawāb Bahādur of Murshidābād.

With the loss of its political importance the size and population of Murshidābād also declined. The largest dimensions of the city proper in 1759 are said to have been 5 miles along the Bhāgīrathi in length and 2½ miles in breadth on each bank of the river, while the circumference of its extensive suburbs has been put as high as 30 miles. In the beginning of the nineteenth century, by which time the decay of the city had already set in, we have several estimates of the population; but we know neither the area which the city was then supposed to

cover, nor the modes of enumeration adopted. In 1815 the number of houses was estimated at 30,000, and the total population at 165,000 souls. In 1829 the Magistrate, Mr. Hawthorn, returned the population at 146,176. In 1837 Mr. Adam found the inhabitants of Murshidābād city to amount to 124,804 persons, which shows a decrease of nearly 15 per cent. in eight years. At the time of the first regular Census in 1872 the population of the town was 46,182, and it has since still further diminished. In 1901, excluding its suburb AZĪMGANJ, which was formed into a separate municipality in 1896, its inhabitants numbered only 15,168.

Murshidābād exhibits at the present day but few traces of its former grandeur. The chief object of attraction is the palace of the Nawāb Bahādur on the banks of the Bhāgīrathi. This is an imposing pile of buildings in the Italian style, designed by Colonel Macleod of the Bengal Engineers, but executed entirely by natives and finished in 1837. The edifice itself is called the Hazār Duāri, or 'house of one thousand doors,' and together with other buildings enclosed within the same wall is known as the Nizāmat Kila or fort. The palace is 425 feet long, 200 feet wide, and 80 feet high. The ground floor is of stone, the first floor of marble, and the second floor of wood. The banqueting hall is 191 feet long and 55 feet wide. In the centre of the building is a dome, from which hangs a superb chandelier of 110 branches. The palace contains many rare old pictures, costly jewellery, china, and arms. The residences of the Nawāb Bahādur and the members of the Nizāmat family are a series of one-storeyed buildings, devoid of beauty and unsafe to live in.

The Imāmbāra (house of prayer), which was built directly in front of the northern principal door in the year 1847, is a fine structure, considerably larger than the Imāmbāra at Hooghly. It stands on the site of a more celebrated building erected by Sirāj-ud-daula, which was accidentally burnt down in 1840.

About 1½ miles to the east of the palace is the Topkhāna, the site of the artillery park of the Nawāb Nāzim, and the east entrance to the old city. Here is a large gun, 17½ feet long with a girth of 5 feet at the breech, weighing 2½ maunds, which was made at Dacca during the reign of Shāh Jahān. The gun is now embedded in a *pīpal*-tree, which has lifted it many feet above the ground. In the palace armoury is another gun, cast by Kishor Dās Karmakār, formerly the property of Mahārājā Krishna Chandra Rai of Nadiā.

One and a half miles south-east of the palace is the Motijhīl ('pearl lake'), built in an old bed of the Bhāgīrathi, in the shape of a horseshoe, by Nawāzish Muhammad Khān, nephew and son-in-law of Alī Vardi Khān, who, with materials brought from the ruins of Gaur, built a stone hall (Sangi-Dālān), Mahalsarai (harem), a mosque and

out-offices, and lived here with his beautiful wife, Ghaseti Begam. Motijhīl was taken by Sirāj-ud-daula in 1756 on the death of Nawāzish Muhammad, and it was from here that he marched for the battle of Plassey. Mīr Jafar built a garden-house here in 1758. Lord Clive stayed at Motijhīl in 1765 to negotiate the transfer of the Dīwāni to the Company, and again in 1766, when the first English *punyā* or revenue collection was held here. Motijhīl was also the residence of Warren Hastings when he became Political Resident at the court of Murshidābād, and of Sir John Shore in a similar capacity.

A mosque at Katrā to the north-east of Motijhīl, about 1½ miles from the town of Murshidābād, contains the mausoleum of Murshid Kulī Khān. This was for a long time the chief mosque of the city, and was a place of pilgrimage for devout Muhammadans, Murshid Kulī Khān being regarded as a saint.

Jafarganj, situated at a distance of about a mile from the palace at Murshidābād, contains the old residence of Mīr Jafar when he was commander-in-chief. His audience hall, since turned into an Imāmbāra, and his dwelling-house still exist. Here the last secret conference before the battle of Plassey took place between him and Mr. Watts, the chief factor at Cossimbazar, who entered the house in a palanquin as a *pardanishīn* woman. It is said that Sirāj-ud-daula was murdered here.

The Mubārak Manzil is a garden-house 2½ miles south-east of the palace; the main buildings and the out-offices were built by the East India Company, and the Sadar Dīwāni Adālat was held here from 1765 to 1781. Nawāb Humāyūn Jāh bought these buildings in the year 1831, and converted them, together with extensive adjoining lands, into a garden-house now known as the Lāl Bangala ('red bungalow'). On the terrace stood the throne of the Sūbahdārs of Bengal, which was made in 1643 at Monghyr; it is a round table of black stone 6 feet in diameter and 18 inches high, with four thick pedestals, the whole hewn out of one block. This has been removed to Calcutta, where it is to find a place in the Victoria Memorial Hall.

About 2 miles north of the city of Murshidābād is Mahimāpur, once the residence of the famous banker Jagat Seth. Here Watts and Walsh met Mīr Jafar and Rājā Rai Durlabh, three days after the battle of Plassey, and conferred concerning payment of the amounts stipulated for by them before the battle was fought. Clive, Watts, Scrafton, Meeran, and Rai Durlabh were again present here on June 29, 1757, when Clive repudiated the agreement with Umichand. A portion of the house has been washed away by the river; the old place of worship, however, and some ruins remain to this day.

On the right bank of the river opposite Motijhīl is the Khushbāgh ('the garden of happiness'), the old cemetery of Alī Vardi Khān, Sirāj-ud-daula, and their family. It consists of three walled enclosures,

in the centre of which is the principal cemetery, containing the tombs of Alī Vardi Khān and Sirāj-ud-daula. The grounds are laid out as gardens with hedges bordering the walks, and contain many fine trees. On the same side of the river, opposite Jafarganj, are the pleasure-grounds of Hīrajhīl ('lake of diamonds'), and the palace at Mansūrganj constructed by Sirāj-ud-daula before he became Nawāb. It was at Mansūrganj palace that Clive seated Mīr Jafar on the *masnad* of Bengal after the battle of Plassey. Near this was the palace of Murādbāgh, where Clive stayed on his entrance into the city after the battle. Only a portion of the foundation remains, and the greater portion of the Hīrajhīl has been cut away by the Bhāgīrathi. Also on the same side of the river is the Roshnībāgh, consisting of beautiful gardens containing the mausoleum of Shujā Khān, Murshid Kulī Khān's son-in-law and successor.

The principal industries of Murshidābād are those fostered by the luxury of the native court. Carving in ivory is an old speciality of the place; and the artificers, though now few in number, still produce highly finished work. Other manufactures are the embroidery of fancy articles with gold and silver lace, the weaving of silk goods, and the making of musical instruments and *hukkas*.

Murshidābād was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 24,000 and the expenditure Rs. 23,000. In 1903–4 the income was Rs. 19,000, of which Rs. 5,500 was obtained from a tax on persons; and the expenditure was Rs. 18,000. The official name for Murshidābād is Lālbāgh as the head-quarters of the Lālbāgh subdivision, and it contains subdivisional offices, a sub-jail with accommodation for 12 prisoners, and a dispensary with 22 beds. The most important educational institutions are the Nawāb's *madrasa*, intended exclusively for the relatives of the Nawāb Bahādur, and the Nizāmat high school maintained by the Nawāb.

Murtazāpur Tāluk.—*Tāluk* of Akola District, Berār (to which it was transferred from Amraotī District in August, 1905), lying between 20° 26′ and 20° 53′ N. and 77° 18′ and 77° 47′ E., with an area of 610 square miles. The population fell from 121,657 in 1891 to 118,022 in 1901. The density is 193 persons per square mile. The *tāluk* contains 260 villages and two towns, MURTAZĀPUR (population, 6,156), the head-quarters, and KĀRANJA BIBI (16,535). The demand for land revenue in 1903–4 was Rs. 4,11,000, and for cesses Rs. 33,000. The *tāluk* lies almost entirely in the Pāyānghāt, the fertile valley of Berār, but the extreme south extends to the slopes of the southern plateau.

Murtazāpur Town.—Head-quarters of the *tāluk* of the same name in Akola District, Berār, situated in 20° 44′ N. and 77° 25′ E., on the Nāgpur branch of the Great Indian Peninsula Railway, 386 miles from

Bombay. Population (1901), 6,156. Murtazāpur, probably named after Murtazā Nizām Shāh of Ahmadnagar, has outstripped the neighbouring village of Sirson, which in the days of Akbar was the head-quarters of the *pargana*. Large quantities of cotton are sent here from KARĀNJA and other places for carriage to Bombay, and the town has seven cotton-presses and ten ginning factories.

Murwāra Tahsīl.—Northern *tahsīl* of Jubbulpore District, Central Provinces, lying between 23° 36′ and 24° 8′ N. and 79° 58′ and 80° 58′ E., with an area of 1,196 square miles. The population decreased from 173,308 in 1891 to 161,673 in 1901. The density in the latter year was 135 persons per square mile, which is considerably below the District average. The *tahsīl* contains one town, MURWĀRA (population, 14,137), the head-quarters; and 516 inhabited villages. Excluding 137 square miles of Government forest, 66 per cent. of the available area is occupied for cultivation. The cultivated area in 1903–4 was 607 square miles. The demand for land revenue in the same year was Rs. 1,29,000, and for cesses Rs. 14,000. The country is broken and uneven, being occupied by outlying spurs of the Vindhyan and Sātpurā ranges. The north-eastern portion, forming part of the Bijerāghogarh *pargana*, is the most fertile. In contradistinction to the rest of the District, the prevalent soil is sandy, and autumn crops are principally grown.

Murwāra Town.—Head-quarters of the *tahsīl* of the same name in Jubbulpore District, Central Provinces, situated in 23° 50′ N. and 80° 24′ E., 56 miles from Jubbulpore city by rail. The station for Murwāra is Katnī junction, so called from the river Katnī on which the town stands. Population (1901), 14,137. The town is rapidly growing in importance, and is one of the leading goods stations on the East Indian Railway. Murwāra was created a municipality in 1874. The municipal receipts during the decade ending 1901 averaged Rs. 9,100. In 1903–4 the receipts were Rs. 10,000, chiefly derived from a house tax and brokers' fees. Sixteen lime factories are situated near Murwāra, in which the large local deposits of limestone are burned, employing some 2,500 labourers. Besides, a number of sandstone quarries and a fuller's earth quarry are worked, and mills have been established for the manufacture of paint. These, as well as eight small flour-mills, are worked by water-power from the Katnī river. The town contains an English middle school and a Zanāna Mission girls' school, besides branch schools and a dispensary.

Musāfirkhāna.—North-western *tahsīl* of Sultānpur District, United Provinces, comprising the *parganas* of Jagdīspur, Gaurā Jāmon, Isaulī, and Musāfirkhāna, and lying between 26° 13′ and 26° 40′ N. and 81° 32′ and 81° 59′ E., with an area of 397 square miles. Population increased from 251,221 in 1891 to 261,036 in 1901. There are

434 villages, but no town. The demand for land revenue in 1903-4 was Rs. 3,51,000, and for cesses Rs. 57,000. The density of population, 658 persons per square mile, is slightly above the District average. Part of the northern boundary is formed by the Gumtī, which then crosses the *tahsīl*, and occasionally causes heavy floods. The banks of this river, and of its small tributary the Kāndū, are cut up by ravines; but a short distance away the soil becomes more fertile. In 1903-4 the area under cultivation was 231 square miles, of which 96 were irrigated. Wells are the most important source of supply.

Mūsā Khel.—*Tahsīl* of the Mūsā Khel-Bārkhān subdivision, in the north-eastern corner of Loralai District, Baluchistān, situated between 30° 17′ and 31° 28′ N. and 69° 28′ and 70° 15′ E. Its area is 2,213 square miles, and population (1901) 15,537; the land revenue in 1903-4 amounted to Rs. 24,000. The head-quarters station is Mūsā Khel Bāzār; the only other place worth mention is Drug (population, 586). Fifty-four other villages are shown on the revenue rolls, but they seldom contain any permanent houses. Cultivation is in its infancy, and cattle-grazing is the chief occupation, the pasture grounds around Khajūri affording much fodder.

Mūsā Khel-Bārkhān.—Subdivision of Loralai District, Baluchistān, comprising the two *tahsīls* bearing the same names.

Mūsi.—River of Hyderābād State, rising in the Anantagiri hills in the Patlūr *tāluk* of the Atrāf-i-balda District. It flows almost due east for a distance of 112 miles, when it receives the Aler on the left, near Chittūr, and thence flows in a south-easterly direction until it falls into the Kistna, after a total course of about 150 miles. Several channels have been made at different parts of the course of this river, which act as feeders for large tanks or supply direct irrigation. The city of Hyderābād stands on its right bank.

Musiri Subdivision.—Subdivision of Trichinopoly District, Madras, consisting of the Musiri and Kulittalai *tāluks*.

Musiri Tāluk.—*Tāluk* in Trichinopoly District, Madras, lying between 10° 54′ and 11° 23′ N. and 78° 10′ and 78° 52′ E., with an area of 762 square miles. The population rose from 282,619 in 1891 to 294,383 in 1901. The *tāluk* contains one town, Turaiyūr (population, 12,870), and 156 villages. The demand for land revenue and cesses in 1903-4 amounted to Rs. 5,02,000. The *tāluk* is bounded on the south by the Cauvery river. The Pachaimalai Hills occupy the northern part, and the Kollaimalais, which lie entirely within Salem District, form the boundary at the north-west corner. South-west of the Kollaimalais is a detached hill, the Talamalai, which is a prominent object in the landscape, and commands a fine view. An attempt was once made to make it a hot-season residence for the Collectors of Trichinopoly. There is another small hill (Tiruvengimalai) about 3 miles to the west

of Musiri, from the top of which a good panorama of the Cauvery valley can be obtained. The Turaiyūr *zamīndāri* lies in this *tāluk*. The Kāttuputtūr *mittah* in the south-western corner is the only estate of this description in the District, and was transferred from Salem in 1851. It comprises five villages, and pays an annual *peshkash* of Rs. 15,900. It was created by Government in 1802 and given to Sarvottama Rao, then head *sheristadār* of Salem.

Mussoorie (*Mansūri*).—Hill station and sanitarium in Dehra Dūn District, United Provinces, situated in 30° 27′ N. and 78° 5′ E. It stands on a ridge of the Outer Himālayas at a height of 6,000 to 7,500 feet above sea-level, among beautiful and varied mountain scenery, and forms practically one town with LANDOUR, where there is a convalescent dépôt for troops. The population of the municipality and cantonment in the cold season has varied from 2,753 in 1872 to 4,852 in 1881, 7,175 in 1891, and 6,461 in 1901. In September, 1900, the population within municipal limits was 14,689, of whom 7,420 were Hindus, 3,424 Musalmāns, and 3,660 Christians (mostly Europeans and Eurasians). The cantonment population was 3,711, of whom 1,516 were Christians.

Mussoorie became a sanitarium in 1826, the year before Landour was made a convalescent dépôt for troops, and has gradually become one of the most popular health resorts in Northern India. Up to 1900 it was reached by road from Sahāranpur, 58 miles away, but the opening of the Hardwār-Dehra Railway has made it more accessible. Dehra is about 7 miles from RĀJPUR, at the foot of the hills, from which Mussoorie is reached by a bridle-path 7 miles long or by a cart-road of 14 miles. During the hot season the members of the District staff reside for part of each month at Mussoorie, and it is the summer head-quarters of field parties of the Trigonometrical Survey of India. The Mussoorie municipality was constituted in 1850. During the ten years ending 1901 the receipts averaged Rs. 71,800, besides loans from Government, amounting to Rs. 1,16,000, for water-works and sewerage. In 1903-4 the receipts were 1·6 lakhs, including tax on houses and land (Rs. 32,000), tolls (Rs. 50,000), conservancy tax (Rs. 19,000); and the expenditure was 1·4 lakhs, including conservancy (Rs. 28,000), water-supply (Rs. 13,000), general administration (Rs. 22,000), roads (Rs. 26,000), interest and debt (Rs. 7,000). The Bhilārū sewage shoot for the disposal of refuse is the most important sanitary work, carried out recently at a cost of Rs. 70,000; schemes for an improved water-supply and electric lighting are under consideration.

Mussoorie exists chiefly as a health resort, and the only manufacture is that of beer at two breweries, which employed 131 men in 1903 and made nearly half a million gallons of beer. It is of great importance as an educational centre for European and Eurasian children; and there are nine schools for boys and five for girls of these classes, with about

600 boarders and 200 day scholars, besides a school at Landour. A Roman Catholic cathedral is under construction.

Mustafābād.—North-western *tahsīl* of Mainpurī District, United Provinces, conterminous with the *pargana* of the same name, lying between 27° 8′ and 27° 31′ N. and 78° 27′ and 78° 46′ E., with an area of 318 square miles. Population increased from 155,253 in 1891 to 163,180 in 1901. There are 265 villages and only one town, which contains less than 5,000 inhabitants. The *tahsīl* head-quarters were formerly at Mustafābād, but were moved to Jasrāna in 1898. The demand for land revenue in 1903–4 was Rs. 2,90,000, and for cesses Rs. 46,000. The density of population, 513 persons per square mile, is slightly above the District average. Three rivers—the Arind, Sengar, and Sirsā—cross the *tahsīl*, the Sengar having two branches known as Sengar and Senhar. A sandy ridge runs transversely from north-west to south-east, but most of the soil is a fertile loam. In the south-western half the wells are often brackish, and the weed *baisurī* (*Pluchea lanceolata*) is common. Irrigation is supplied by three branches of the Lower Ganges Canal. In 1902–3 the area under cultivation was 181 square miles, of which 101 were irrigated. Canals serve about one-fifth of the irrigated area, and wells supply most of the remainder.

Muṭhā Canals.—Two canals on the right and left bank of the Muthā river, in Poona District, Bombay, with a total length of 88 miles, commanding 26 square miles in the Haveli *tāluka* and the Dhond *petha* of Poona District. The canals, which were constructed between 1873 and 1878—the Right Bank Canal in 1873–4 and the Left Bank in 1877–8—are fed by LAKE FIFE. The capital outlay on the canals was originally 26½ lakhs; but the canals and the reservoir of Lake Fife have involved a total expenditure, up to 1904, of 71 lakhs. The maximum hitherto irrigated has been 22 square miles. One of the main objects of the Muthā Canals is the supply of drinking-water to Poona and Kirkee. Water rates are charged according to the nature of the crops. The gross assessment on crops, and the revenue expenditure on the canals, have been, in thousands of rupees:—

	Assessment.	Expenditure.
1880–90 (average)	1,62	69
1890–1900 (average) . . .	2,54	82
1903–4	2,92	1,00

The percentage of net profits on these works varies from 2½ to a little over 3 per cent.

Muttra District (*Mathurā*).—North-western District of the Agra Division, United Provinces, lying between 27° 14′ and 27° 58′ N. and 77° 17′ and 78° 13′ E., with an area of 1,445 square miles. It is bounded on the north by the Punjab District of Gurgaon and by Alīgarh; on the east by Alīgarh and Etah; on the south by Agra; and

on the west by the Bharatpur State. Muttra lies on both sides of the Jumna, which is fringed with ravines. In the centre of the western border the outlying spurs of the Arāvallis penetrate the District, but do not rise more than 200 feet above the plain. Muttra is remarkable for the absence of rivers. Besides the Jumna there are no channels, except the Karon or Karwan which flows across the east of the District, and the Patwai or Patwāhā which joins the Jumna in the Māt *tahsīl*. The Jumna has left a chain of swamps, representing an older channel, east of its present bed. One of these is called Nohjhīl, a shallow marsh, which before it was drained sometimes attained a length of 6 miles in the rains. There is a curious depression in the west of the District, which extends from the Bharatpur and Alwar States, but there is no flow of water.

Physical aspects.

The greater part of the District is the ordinary alluvium of the Gangetic plain, but the western hills are chiefly composed of quartzite. *Kankar* or nodular limestone is common, especially in the Jumna ravines. While the water in many wells is brackish, saline efflorescences are less common than elsewhere in the Doāb.

The flora of the western half of the District resembles that of Rājputāna. Early in the nineteenth century Bishop Heber was struck by the wildness of the country. There are still large stretches of waste land, especially in the Chhāta *tahsīl*, covered with jungle in which the *ber* (*Zizyphus Jujuba*) is the largest tree. Along the canal the *babūl* (*Acacia arabica*) has been largely planted, and the *nīm* (*Melia Azadirachta*) is fairly common, but other trees are scarce[1]. The total area of grove land is less than 9 square miles.

Leopards, wolves, hyenas, and *nīlgai* are found chiefly in the hilly tracts near the Bharatpur border; and wild cattle from Bharatpur State formerly did much damage, but are now kept out by a continuous fence and ditch. Wild hog are plentiful in the Jumna ravines and *khādar*, and Muttra is celebrated for 'pig-sticking.' Antelope are very common, and the *chinkāra* or 'ravine deer' is also found. In the cold season snipe and duck abound in the swamps and small tanks. Fish are found in the Jumna and in many tanks, but are not much used for food.

The climate is very dry and hot, owing to the proximity of sandy deserts to the west. Great extremes of temperature occur. In January the mean temperature falls to 60°, while in June it rises to over 93°. In winter ice is not uncommonly formed in shallow puddles in the early morning, while in April, May, and June hot winds blow with great force.

The annual rainfall during the last seventeen years has averaged 26 inches, which is evenly distributed, though the Jumna valley receives

[1] A list of trees is given in Mr. F. S. Growse's *Mathurā* (p. 421).

slightly more than the portions of the District on either side. Variations from year to year are large; the fall has been less than 16 inches, and has reached nearly 36.

History.

Muttra was the capital of the ancient kingdom of SŪRASENA, and its importance as a religious centre is referred to by Ptolemy, who calls it 'Modoura of the gods.' Arrian and Pliny describe it as Methora. The earliest facts relating to its history are derived from the coins found here, which indicate that Muttra was ruled by a series of Hindu Rājās in the second and first centuries B.C., followed by Saka Satraps, who gradually assume Hindu names. In the first and second centuries A.D., the inscriptions, found in considerable numbers, prove that the sway of the great Kushan kings was recognized here, and Muttra was a stronghold of the Jains. In the sixth century Hiuen Tsiang found a large city, containing 20 monasteries with 2,000 priests. Muttra was probably one of the places sacked by Mahmūd of Ghazni in 1018-9, but the District plays little part in the early Muhammadan period, when it was largely held by Mewātīs. While its political history is slight, Muttra is important in the religious history of modern Hinduism. The reformed Vaishnava creeds had their origin in Southern and Eastern India; but in the fifteenth and sixteenth centuries several new sects were founded here, which still influence Hindu thought. The western side of the District is celebrated as the Braj Mandal or country of Krishna, and almost every grove, mound, and tank is associated with some episode in his life. Throughout the year, and especially in the rains, bands of pilgrims from all parts of India may be seen reverently visiting the holy shrines. The increased religious zeal of the Hindus attracted the notice of Shāh Jahān and Aurangzeb, who took measures to repress it.

As the Mughal empire fell to pieces, the history of the District merges in that of the Jāts of Bharatpur, and only acquires a separate individuality with the rise of Sūraj Mal. In 1712 Badan Singh, father of the famous adventurer, proclaimed himself leader of the Jāts, and took up his residence at Sahār, where he built a handsome palace. In his old age he distributed his possessions among his sons, giving the south-western portion of Bharatpur to his youngest, Pratāp Singh, and the remainder of his dominions, including Muttra, to his eldest, Sūraj Mal. On Badan Singh's death, Sūraj Mal moved to Bharatpur and assumed the title of Rājā. In 1748 the Mughal emperor, Ahmad Shāh, invited the Jāt leader to join with Holkar under the command of Nawāb Safdar Jang in suppressing the Rohilla rebellion. When Safdar Jang revolted (*see* OUDH), Sūraj Mal and his Jāts threw in their lot with him, while Ghāzī-ud-dīn, the Wazīr, obtained the help of the Marāthās. Safdar Jang retreated to Oudh, whereupon Ghāzī-ud-dīn laid siege to Bharatpur, but, mistrusting his Marāthā allies, shortly returned to Delhi,

deposed Ahmad Shāh, and raised Alamgīr II to the throne. When Ahmad Shāh Durrāni invaded India in 1757, Sardār Jahān Khān endeavoured to levy tribute from Muttra; but finding that the people withdrew into their forts, he fell back upon the city, plundered its wealth, and massacred the inhabitants. Two years later the new emperor was murdered, and the Afghān invader once more advanced upon Delhi. Ghāzī-ud-dīn fled to Muttra and Bharatpur, and joined the Hindu confederacy of Marāthās and Jāts which shattered itself in vain against the forces of Ahmad Shāh at Pānīpat in January, 1761. Sūraj Mal, however, withdrew his forces before the decisive battle, marched on Agra, ejected the Marāthās, and made himself master also of Muttra.

Ahmad Shāh having returned to Afghānistān, Sūraj Mal thought it a favourable opportunity to attack the Rohilla chief, Najīb-ud-daula. Marching to Shāhdara, 6 miles from Delhi, he was, however, surprised, captured, and put to death in 1763 by a small party of the imperialists. Two of his sons, who succeeded to his command, were successively murdered, and the third, Nawal Singh, after losing Agra during Zābita Khān's rebellion, died in 1776. The fourth son, Ranjīt Singh (not to be confounded with the more famous Sikh Māhārājā), inherited Bharatpur with only an insignificant strip of territory.

During the contest between Sindhia and the Rājput princes in 1788, the former obtained the aid of the Jāts in raising the siege of Agra, then held by Sindhia's forces, and besieged by Ghulām Kādir. In 1803 Ranjīt Singh of Bharatpur joined Lord Lake in his campaign against Sindhia, with a force of 5,000 Jāt horsemen; and upon the defeat of the Marāthās he received as a reward the south-western portion of Muttra, with Kishangarh and Rewārī. But in the following year he gave shelter to Holkar, when a fugitive after the battle of Dīg. This led to the first siege of Bharatpur by Lord Lake, and, although his capital was not taken, Ranjīt Singh lost the territory granted to him in 1803.

Thenceforward Muttra remained free from historical incidents till the Mutiny of 1857. News of the Meerut outbreak reached Muttra on May 14 in that year. Two days later, some Bharatpur troops arrived, and marched for Delhi under British officers. The force halted at Hodal on the 26th; and on the 30th the sepoys sent to escort the treasure from Muttra to Agra proved mutinous, so that the officials were compelled to fly and join the troops at Hodal. Shortly afterwards the Bharatpur force likewise mutinied, and the Europeans fled for their lives. The Magistrate returned to Muttra, and after vainly visiting Agra in search of aid, remained with the friendly Seths (native bankers) till June 14. After the mutiny of the Gwalior Contingent at Alīgarh on July 2, the Nīmach insurgents, marching on Muttra, drove all the

Europeans into Agra. The whole eastern portion of the District then rose in rebellion, till October 5, when the Magistrate made an expedition from Agra, and captured the rebel leader, Deokaran. Colonel Cotton's column shortly afterwards proceeded through the District to Kosī, punishing the insurgent villages; and after its return to Agra through Muttra no further disturbances took place. In the nineteenth century the religious teaching of Muttra affected Dayānand, founder of the Arya Samāj, who studied here for a time.

The city of Muttra and its neighbourhood are rich in archaeological remains, and the exploration of the Jain *stūpa* in the Kankālī *tīla* or mound has yielded valuable dated inscriptions of the Kushan kings[1]. The finest Hindu temples at Muttra were demolished or converted into mosques by the Muhammadans, but some have survived at BRINDĀBAN and MAHĀBAN. There are also fine specimens of the Jāt architecture of the eighteenth century at GOBARDHAN.

Population.

Muttra contains 14 towns and 837 villages. Population has hardly yet recovered from the effects of the famine of 1877-8. The number at the four enumerations was: (1872) 782,460, (1881) 671,690, (1891) 713,421, and (1901) 763,099. The District is divided into five *tahsīls*—MUTTRA, CHHĀTA, MĀT, MAHĀBAN, and SADĀBĀD—the head-quarters of each being at a place of the same name. The principal towns are the municipalities of MUTTRA, BRINDĀBAN, and KOSĪ.

The following table gives the chief statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Muttra	396	6	218	246,521	623	+ 5·0	17,100
Chhāta	406	2	158	173,756	428	+ 13·2	5,463
Māt	223	...	142	97·370	437	+ 8·9	2,683
Mahāban	240	4	192	136,566	569	+ 2·3	4,934
Sadābād	180	2	127	108,886	605	+ 6.6	2,818
District total	1,445	14	837	763,099	528	+ 7·0	32,998

Of the total, 89 per cent. are Hindus and 10 per cent. Musalmāns. The density of population is higher than the Provincial average, but lower than in the other Doāb Districts. Between 1891 and 1901 the rate of increase was higher than in the Provinces as a whole. About 99 per cent. of the people speak Western Hindī, the prevailing dialect being Braj.

The most numerous Hindu caste is that of Chamārs (leather-workers and labourers), 120,000. Brāhmans number 115,000; Jāts, 102,000;

[1] *Epigraphia Indica*, vols. i and ii; V. A. Smith, *The Jain Stūpa at Mathurā*.

and Rājputs, 67,000. The numbers then decrease, and the largest castes are: Korīs (weavers), 17,000; Gadariās (shepherds), 16,000; and Gūjars, 14,000. The Jāts, Gūjars, and Aheriās (14,000) belong to the western Districts; and the Ahivāsīs, who claim to be Brāhmans and number 1,400, are hardly found outside this District. Among Muhammadans, Shaikhs number 13,000; Rājputs, 9,000; and Pathāns, 7,000. The agricultural population forms 53 per cent. of the total, while general labourers form 10 per cent., and those supported by personal services 8 per cent.

There were 2,031 native Christians in 1901. The earliest mission was that of the Baptists, who commenced work early in the nineteenth century. It was followed in 1860 by the Church Missionary Society, and in 1887 by the American Methodist Church. The last of these has been most successful, and 1,887 of the native Christians in 1901 were Methodists.

Agriculture.

A considerable difference is to be noted between the tracts east and west of the Jumna. The latter is less fertile, and irrigation was difficult before the construction of the Agra Canal, as the subsoil water is often brackish. Hamlets, apart from the main village site, are almost unknown; and this custom, which had its origin in the troubled times when the cultivator ploughed with sword and shield lying in a corner of his field, affects cultivation, as manure is applied only to the home land near the village. On the other hand, Jāts, who are the best cultivators, are chiefly found west of the Jumna, and the eastern *tahsīls* are plagued by a weed called *baisurī* (*Pluchea lanceolata*). Besides the barren land bordering on the Jumna ravine, there is a strip of sandy soil along the foot of the hills on the western border.

The tenures are those commonly found in the Provinces. In 1883, out of 1,375 *mahāls* 478 were *zamīndāri*, 492 *pattīdāri* and imperfect *pattīdāri*, and 505 *bhaiyāchārā*. West of the Jumna some villages belong to *talukdāri* estates, chiefly to MURSĀN. The main agricultural statistics for 1903-4 are given below, in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Muttra	396	297	117	53
Chhāta	406	329	113	44
Māt	223	170	53	30
Mahāban	240	195	47	20
Sadābād	180	154	59	8
Total	1,445	1,145	389	155

The chief food-crops are *jowār* and barley, which occupied 268 and 205 square miles respectively, or 23 and 18 per cent. of the net area

cropped. Gram (193), wheat (153), and *bājra* (93) are also important, while cotton covered an area of 131 square miles. The small area under specially valuable crops—sugar-cane, tobacco, and vegetables—is striking.

There have been no improvements of recent years either in methods or in the introduction of new seed. The principal change has been the substitution of wheat for cotton, largely owing to the extension of canals. A small but steady demand exists for loans under the Land Improvement and Agriculturists' Loans Acts, which amounted to Rs. 96,000 and Rs. 1,16,000 during the ten years ending 1900; but advances in the famine year 1896–7 account for Rs. 48,000 and Rs. 39,000 respectively. In 1903–4 the loans were only Rs. 1,500 and Rs. 1,065. With the extension of canal-irrigation, drainage has also been improved, especially in the Chhāta *tahsīl*, and the Patwai or Patwāhā in Māt has been deepened. Private enterprise has drained the lake known as Nohjhīl, while a few miles south of Muttra a dam has been built by the *zamīndārs* near Koela to keep out the Jumna.

The Jumna ravines and the *khādar* provide ample grazing ground, but there is no indigenous breed of cattle. Kosī is a great cattle mart, at which animals are sold which have been imported from the Punjab or Bharatpur State. Horse- and mule-breeding are becoming popular, and three horse and two donkey stallions have been provided by Government. The sheep are of the ordinary type.

In 1903–4 the area irrigated was 389 square miles, out of a cultivated area of 1,145 square miles. Canals supplied 201 square miles, and wells 188. The western division of the District is amply served by the Agra Canal and its distributaries. Up to 1903 the eastern portion had no canal-irrigation except in a few villages of the Māt *tahsīl*; but the Māt branch of the Upper Ganges Canal now supplies every part, irrigating 25,000 acres in the spring of 1904 and more than 20,000 in the autumn. Tanks and rivers are not used at all for irrigation, and the use of the former is forbidden by the religious sanctity attaching to most of them.

Sandstone is obtainable from the low hills in the Chhāta *tahsīl*, but most of the stone used in the District is brought from Agra or Bharatpur. The Giri Rāj, which is of sandstone, is considered so holy that to quarry it would be sacrilege. *Kankar* or nodular limestone is found in all parts, and occurs in block form in the Sadābād *tahsīl*.

The manufactures of the District are not very important. Calico printing is carried on at Brindāban, and old flannel is skilfully repaired.

Trade and communications.

The masons and stone-carvers of Muttra are justly celebrated, and many houses and temples are adorned with the graceful reticulated patterns which they produce. A special paper used for native account-books is made here,

and the District is noted for the quaint silver models of animals produced at Gokul. In 1903 there were 10 cotton-gins and presses, employing about 970 hands. A few small indigo factories are still worked, but the industry is not thriving.

Grain and cotton are the chief exports, and the imports include sugar, metals, oilseeds, and piece-goods, most of the trade being with Hāthras. Muttra city is an important dépôt for through traffic. Thus cotton and oilseeds from Bharatpur State pass through here to Hāthras, while sugar, salt, and metals are returned. Kosī, in the north of the District, is a great cattle market, where the peasants of the Upper Doāb purchase the plough-animals brought from Rājputāna or the Punjab.

The East Indian Railway runs for 7 miles across the east of the District, with one station. The narrow-gauge Cawnpore-Achhnerā line enters the District at the centre of the eastern boundary, crosses the Jumna, and then turns south. It provides communication with Hāthras on the east and Agra on the south, and from Muttra city a short branch serves the pilgrim traffic to Brindāban. An extension of the Midland section of the Great Indian Peninsula Railway from Agra to Delhi, passing through Muttra, was opened in 1905.

The District is well supplied with roads. Out of 500 miles, 171 are metalled and 329 unmetalled. Excluding 57 miles of metalled roads, all of these are maintained at the cost of Local funds. Avenues of trees are kept up on 31 miles. The main route is that from Agra to Delhi, a famous road under native rule, which traverses the western half of the District from south to north. Other roads pass from Muttra west to Dīg and Bharatpur, east through Hāthras to the Ganges, and south-east to Jalesar and Etah. The Agra Canal was used for navigation, but has been closed for this purpose since 1904.

Famine.

Though precise records do not exist, famine must have been frequent before British rule began, and the awful disaster of 1783-4 was especially severe in this tract. In 1813 the north of the District was a centre of great distress. Many persons perished of hunger, or sold their wives and children for a few rupees or a single meal. In 1825-6 a terrible drought affecting the neighbouring country was especially felt in the Mahāban *tahsīl*. In 1837-8 there was scarcity in all parts of the District, but it was not so severe as in the Central Doāb; and in 1860-1 and 1868-9 Muttra again suffered less than other Districts, though distress was felt. The famine of 1877-8 struck this tract more heavily than any other District in the Division, and mortality rose to 71·56 per 1,000. The monsoon fall in 1877 was only 4·3 inches, and the deficiency chiefly affected the main food-crops which are raised on unirrigated land. As usual, distress was aggravated by an influx of starving people from Rājputāna. In 1896-7 famine was again felt, especially in the Mahāban and

Sadābād *tahsīls*, which had no canal-irrigation. In June, 1897, the number on relief works amounted to 23,000. About Rs. 86,000 was advanced for the construction of temporary wells, chiefly east of the Jumna, and 1·8 lakhs of revenue was remitted or suspended. There was scarcity in 1899–1900, and advances were freely made, but relief works were not found necessary. The canal extensions of 1903 have probably secured the District against serious famine in the future.

Administration.

The ordinary staff of the District includes a member of the Indian Civil Service and three Deputy-Collectors recruited in India. A *tahsīldār* resides at the head-quarters of each of the five *tahsīls*. Two Executive Engineers of the Canal department are stationed at Muttra city.

Muttra is included in the Civil and Sessions Judgeship of Agra. There are two Munsifs, one at Muttra and one at Mahāban. Owing to its situation near a Native State, serious dacoities are not infrequent, and cattle-theft is common. Jāts, and in some places Gūjars, are the chief cattle-lifters; and *langūrī* is regularly practised, a system by which the owner recovers his stolen property on payment of a certain proportion of its value. The Mallāhs (boatmen and fishermen) of the north of the District are noted pickpockets and railway-thieves, frequenting all the large fairs of the United Provinces, and even visiting Bengal.

Most of the District came under British administration at the end of 1803, and was then distributed between the surrounding Districts of Farrukhābād, Etāwah, and Agra. In 1804 the *parganas* included in Farrukhābād and Etāwah were made over to Alīgarh; but in 1823 the nucleus of the eastern part of the District was formed with head-quarters at Sadābād, and in 1832 Muttra, which had always been a cantonment, became the civil capital. There are still enclaves belonging to Bharatpur State, the Rājā of which held part of the present District up to 1826. The early settlements were made under the ordinary rules for short periods of one, three, or five years, and were based on estimates. In the western part of the District the farming and *talukdāri* system was maintained for some time as in Alīgarh, and was even extended, as *talukdāri* rights were sometimes granted in lieu of farms. In the eastern portion farmers and *talukdārs* were set aside from the first. The first regular settlement under Regulation VII of 1822 was made on different principles. West of the river an attempt was made to ascertain the rental 'assets,' while in the east the value of the crops was estimated. The former settlement was not completed when Regulation IX of 1833 was passed, and the latter broke down from the excessive demand imposed. The revenue of the whole District (excluding 84 villages transferred from Agra in 1878) was therefore revised under Regulation IX of 1833, and

an assessment of 13·6 lakhs fixed. The next settlement was made between 1872 and 1879. The method adopted was to assess on what were considered fair rents, arrived at by selection from actual rents paid. These were applied to the different classes of soil into which each village was divided. The revenue sanctioned amounted to 15·3 lakhs, to which must be added 1 lakh, the revenue of villages transferred from Agra in 1878. The incidence of revenue fell at Rs. 1–13 per acre, varying from Rs. 1–4 to Rs. 2–14. The bad years following the famine of 1877–8 and the fever of 1879 led to a decline in cultivation; and revisions of settlement were made between 1887 and 1891, which reduced the demand by a lakh. The settlement has now been extended for a further period of ten years.

Collections on account of land revenue and revenue from all sources are shown below, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . . .	15,95	15,08	15,41	14,90
Total revenue . . .	19,73	20,72	21,66	21,22

Outside the three municipalities—MUTTRA, BRINDĀBAN, and KOSĪ—and eleven towns administered under Act XX of 1856, local affairs are managed by the District board, which has a total income and expenditure of about 1·3 lakhs, chiefly derived from rates. About half the expenditure is incurred on the maintenance of roads and buildings.

There are 24 police stations, and the District Superintendent of police is assisted by 4 inspectors. In 1904 the force consisted of 91 subordinate officers and 392 constables, besides 320 municipal and town police, and 1,640 rural and road police. The District jail has accommodation for 318 prisoners.

Muttra takes a fairly high place in the Provinces in regard to literacy, 4·3 per cent. of the population (7·8 males and 0·3 females) being able to read and write in 1901. This is largely owing to its importance as a religious centre. The number of public schools fell from 165 in 1880–1 to 132 in 1900–1, but the number of pupils increased from 5,505 to 6,511. In 1903–4 there were 197 public schools with 8,981 pupils, including 478 girls, besides 82 private institutions with 1,781 pupils. All of these schools were primary, except nine of the public and two of the private schools. The expenditure on education in 1903–4 was Rs. 43,000, of which Rs. 31,000 was provided from Local and municipal funds and Rs. 8,300 by fees. Most of the schools are managed by the District and municipal boards.

There are eight hospitals and dispensaries, which contain accommodation for 77 in-patients. In 1903 the number of cases treated was 58,000, of whom 995 were in-patients, and 3,600 operations were

performed. The total expenditure was Rs. 16,000, chiefly from Local funds.

In 1903-4 the number of persons vaccinated was 24,000, representing 31 per 1,000 of population. Vaccination is compulsory only in the municipalities and the cantonment.

[R. S. Whiteway, *Settlement Report* (1879); F. S. Growse, *Mathurā* (Allahābād, 1883); *District Gazetteer* (1884, under revision); V. A. Smith, *The Jain Stūpa at Mathurā.*]

Muttra Tahsīl.—South-western *tahsīl* of Muttra District, United Provinces, conterminous with the *pargana* of Muttra, lying between 27° 14′ and 27° 39′ N. and 77° 20′ and 77° 51′ E., with an area of 396 square miles. Population rose from 234,914 in 1891 to 246,521 in 1901. There are 218 villages and six towns, the largest of which are MUTTRA (population, 60,042), the District and *tahsīl* head-quarters, BRINDĀBAN (22,717), and GOBARDHAN (6,738). The demand for land revenue in 1903-4 was Rs. 2,94,000, and for cesses Rs. 55,000. The density of population, 623 persons per square mile, is the highest in the District. The *tahsīl* extends from the Jumna to the low hills on the Bharatpur border, and contains the celebrated hill called Giri Rāj. To the east the influence of the Jumna extends for three miles inland, low alluvial soil, ravines, and sandy dunes being found along its banks. From the edge of this broken ground a flat uniform plain stretches to the hills, without a single stream. The principal autumn crops are *jowār*, cotton, and *bājra*; the spring crops are gram and wheat. In 1903-4 the area under cultivation was 297 square miles, of which 117 were irrigated. The Agra Canal supplies an area twice as large as that served by wells.

Muttra City.—Head-quarters of the District of the same name, with cantonments, in the United Provinces, situated in 27° 30′ N. and 77° 41′ E., on the right bank of the Jumna, on the main road from Agra to Delhi, and on the Cawnpore-Achhnerā Railway, 886 miles from Calcutta and 914 from Bombay. A new broad-gauge line from Agra to Delhi, passing through Muttra, has recently been completed, and another towards Bombay is under construction. Population has fluctuated in the last thirty years: (1872) 59,281, (1881) 57,724, (1891) 61,195, and (1901) 60,042. In 1901 Hindus numbered 46,523, and Musalmāns 12,598.

The city of Muttra is one of the great centres of Hindu religious life, being famous as the birthplace of Krishna, who is now reverenced as the eighth incarnation of Vishnu. Its early history has been narrated in that of MUTTRA DISTRICT. Inscriptions and other relics prove that early in the Christian era it was a centre of Buddhism and Jainism, and in the seventh century the Chinese pilgrim still found Buddhist priests and monasteries. Muhammadan historians chiefly refer to

it as a town to be plundered, or as a seat of idolatry with buildings to be destroyed. A town called Mahārat-ul-Hind, identified as Muttra, was sacked by Mahmūd of Ghazni in 1018–9. About 1500 Sultān Sikandar Lodī utterly destroyed all the shrines, temples, and images. During Akbar's reign religious tolerance led to the building of new temples; but in 1636 Shāh Jahān appointed a governor to 'stamp out idolatry' in Muttra. In 1669–70 Aurangzeb visited the city, changed its name to Islāmābād, and destroyed many temples and shrines, building mosques on two of the finest sites. Muttra was again plundered by the Afghān cavalry of Ahmad Shāh Durrāni in 1757, when a crowd of defenceless pilgrims were slaughtered. The city fell into British hands in 1803 and was at once occupied as a cantonment, but did not become the civil head-quarters of the District till 1832. Archaeological remains of the greatest value have been discovered in and near Muttra[1].

The native city lies along the Jumna, presenting a highly picturesque appearance from the railway bridge or the opposite bank. From the water's edge rises a continuous line of stone *ghāts*, thronged in the early morning by crowds of bathers. Fine stone houses and temples line the narrow road which passes along the *ghāts*; and above these are seen, tier upon tier, the flat-roofed houses of the city, which stand on ground rising up from the river bank. At the north end is the old ruined fort where was situated one of the observatories erected by Rājā Mān Singh of Jaipur, which has now disappeared. In the centre the white minarets of the Jāma Masjid, built in 1662, crown the picture. The main streets are wider and straighter than is usual in an Indian city, and they are paved continuously with stone flags, raised in the centre to secure good drainage. The numerous temples for which the city is noted are usually quadrangles, the walls and entrances of which are adorned with handsome stone carving and reticulated screens. The existing buildings are chiefly modern, and new temples and *dharmsālas* or shelters for pilgrims are still being added by wealthy bankers and the rulers of Native States. West of the city stands the mosque of Aurangzeb, built about 1669, on the lofty site of the temple of Kesava Deva, which was formerly the finest temple in Muttra and was celebrated throughout India. On the *ghāts* towers the Satī Burj or pillar commemorating the *satī* of a Rānī of Jaipur, built about 1570. The Hardinge Gate at the principal entrance to the city, which is a fine specimen of stone carving, was erected by public subscription in memory of a former Collector. South of the city and a little distance from the river lie the cantonments and civil station. Muttra is the head-quarters of the ordinary District staff and also of an Executive Engineer of the Agra Canal. Close to the District offices stands

[1] *Epigraphia Indica*, vols. i and ii; V. A. Smith, *The Jain Stūpa at Mathurā*.

a museum faced with stone, carved in the usual manner, which contains a number of sculptures and other objects found in the District. Muttra is the chief station of the Baptists, of the Church Missionary Society, and of the Methodist Episcopal Mission in the District.

Muttra was constituted a municipality in 1866. During the ten years ending 1901 the income and expenditure averaged Rs. 61,000. In 1903-4 the income was Rs. 89,000, chiefly derived from octroi (Rs. 64,000); and the expenditure was Rs. 81,000. The sewage of the city is collected in tanks and carried by carts to a distance. Solid matter is trenched on the grass farm in cantonments.

While the prosperity of the city chiefly depends on its religious attractions, its commercial importance is increasing. Throughout the nineteenth century it was the head-quarters of the great banking firm of the Seths, Mani Rām and Lakshmī Chand, one of the most celebrated in India, which has now collapsed. Four cotton-gins and presses employed 392 hands in 1903, and there is a considerable export of cotton and grain, while sugar, piece-goods, and metals are imported. The city is noted for the production of paper for native account-books, and also for the manufacture of brass idols and other small articles sold to pilgrims. It contains a large number of schools, including a high school with 170 pupils, a *tahsīlī* school with 150, the American Methodist school with 140, besides seven schools for boys and eleven for girls, aided by the District or municipal boards, and twenty private schools and *pāthsālas.*

The population of the cantonments in 1901 was 2,928, and the ordinary garrison consists of a regiment of British cavalry. In 1903-4 the income and expenditure of cantonment funds were both about Rs. 7,000.

Muttupet.—Town in the Tirutturaippūndi *tāluk* of Tanjore District, Madras, situated in 10° 24′ N. and 79° 30′ E., with a station on the District board railway. Population (1901), 9,099. It is about 6½ miles from the sea, but communicates with it by the navigable river Koraiyār, a branch of the Cauvery. Possessing the advantage of a protected bay where native craft can moor during bad weather, the town carries on an active trade with Ceylon all the year round, the chief export being rice.

Muzaffargarh District.—District in the Multān Division of the Punjab, lying between 28° 56′ and 30° 47′ N. and 70° 31′ and 71° 47′ E., with an area of 3,635 square miles. It occupies the extreme southern apex of the Sind-Sāgar Doāb, the wedge-shaped tract between the Indus and the Panjnad or united waters of the 'five rivers,' stretching northward from their confluence in a narrow wedge of land, which gradually widens for about 130 miles, until at its northern border a distance of 55 miles intervenes between their channels. Its shape is therefore that of a

Physical aspects.

tolerably regular triangle. The adjoining Districts are Dera Ghāzi Khān on the west, Miānwāli and Jhang on the north, and Multān on the east, while on the south-east it is bounded by the State of Bahāwalpur. The northern half of the District comprises the valley of the Indus on the west and that of the Chenāb on the east, the wild Thal or central steppe of the Sind-Sāgar Doab extending for a considerable distance down its midst. This arid plateau, rising like a backbone in the centre of the wedge, has a width of 40 miles in the extreme north, and terminates abruptly on either side in a high bank, about 20 miles from the present bed of the Indus, and 3 miles from that of the Chenāb. As the rivers converge, the Thal gradually contracts, until about 20 miles south-west of Muzaffargarh town it disappears altogether. Though apparently an elevated table-land, it is really composed of separate sandhills, whose intermediate valleys lie at a level not much higher than that of the Indus, and some of them at the extreme west were at one time flooded by the bursting of the western barrier ridge or bank. Scattered amid this waste of sand-heaps a few plots of good land occur, which the ceaseless industry of the cultivators has converted into fields of grain. South of the Thal plateau, the space between the rivers contracts to a width of 20 miles, part of which is subject to inundation from either side. The middle tract lies sufficiently high, as a rule, to escape excessive flooding, and is further protected by embankments, while it remains, on the other hand, within the reach of easy irrigation. This portion of the District, accordingly, consists of a rich and productive country, thickly studded with prosperous villages. But in the extreme south, the floods from the two rivers spread at times across the whole intervening tract. On abating, they leave luxuriant pasturage for cattle; and if their subsidence takes place sufficiently early, magnificent crops of wheat, pulse, and gram are raised in the cultivated portion. The towns stand on higher sites or are protected by embankments; but the villages scattered over the lowlands are exposed to annual inundation, during which the people abandon their grass-built huts, and take refuge on wooden platforms attached to every house, where they remain till the floods subside. The Indus, which forms the western boundary of the District, at one time flowed down the centre of the Thal desert. In the middle of the District are numerous villages, now far away from the Indus, whose names denote that at one time they stood on or near the river bank; and the inland portion is full of watercourses which were once beds of the Indus. The Chenāb forms the eastern boundary for a length of 127 miles.

The District contains nothing of geological interest, as it lies entirely on the alluvium. The flora is that of the Western Punjab, with an infusion of the desert and trans-Indus elements. *Populus euphratica* occurs by the river. The date-palm and mango are cultivated. The

tāli (*Dalbergia Sissoo*) is abundant near the Indus, and in most parts the *vān* (*Salvadora*) and the *farwani* (*Tamarix articulata*) are plentiful; but otherwise trees exist only where planted.

Tigers were seen in the dense jungles near the Indus as late as 1879. Wolves and wild hog are common. The hog deer and 'ravine deer' (Indian gazelle) are found; and feathered game, including geese, ducks of all sorts, florican, sand-grouse, and partridges, is plentiful.

The chief feature of the climate is its extreme dryness. The heat from May to September is intense, but a cool wind springs up regularly about 11 p.m., which makes the nights endurable. From November to February severe frosts occur, causing great injury to cotton, mangoes, and turnips. The District is healthy for Europeans, but the natives suffer from malarial fever in the autumn, and from diseases of the eyes and skin in the hot season. The rainfall is very scanty, averaging slightly less than 6 inches in the year. It is in fact impossible to raise crops on land dependent solely on the rainfall.

History.

Muzaffargarh hardly possesses any distinct annals of its own, having always formed part of the Multān province, whose fortunes it has invariably followed. In ancient times this tract was probably ruled by the Hindu dynasty of the Rais, to which succeeded the Brāhman line of Chach. The Arabs made their first appearance in 664, and in 712 it was overrun by Muhammad bin Kāsim. For the next three centuries the country was in the military occupation of the Muhammadans, but it is unlikely that any considerable conversion of its inhabitants or settlements of Muhammadan invaders took place until the Ghaznivid supremacy. Muzaffargarh probably fell under the influence of the Sūmra dynasty which arose in Sind about 1053 and of their successors the Sammās, and under their rule an immigration of Rājput tribes from Hindustān is said to have taken place. During the rule of the Langāh dynasty in Multān the independent kingdom of Sītpur was established in the south of the District; and from that time till the end of the eighteenth century it was held by four separate governments or principalities, which were, during the Mughal period, included in Akbar's *sarkār* of Multān. In the southern angle was Sītpur, founded under a grant made by Bahlol Lodī in 1450, and first held by the Nāhar family, then by the *makhdūms* of Sītpur, and finally, about 1790, annexed by Bahāwal Khān II, of Bahāwalpur. The west central part was governed by the rulers of Dera Ghāzi Khān. A line of Mirāni Balochs, who had settled on the left bank of the Indus at the end of the fifteenth century, ruled till 1769, when one Mahmūd Gūjar, with the aid of the Kalhora governor of Sind, obtained the governorship of Dera Ghāzi Khān. He appears to have been a good ruler, and built the fort of Mahmūd Kot. Shortly after his death Bahāwal Khān II invaded this tract, which had

been thrown open to him by the shifting of the Indus to the west, and by the end of the century the whole of the south was in the possession of Bahāwalpur. The eastern part was nominally ruled by the governors of Multān, and has the same history as that District; and when the Durrāni empire superseded that of Delhi in North-Western India, Muzaffargarh fell to the new power, with the rest of the province. The town of Muzaffargarh was founded in 1794 by the Pathān governor, Muzaffar Khān, and Khāngarh and Ghazanfargarh by members of his family. The north of the District, with the west, was under the Baloch governors and Mahmūd Gūjar, to whom succeeded a family of Jaskāni Balochs and the Kalhorās of Sind. In 1792 a subordinate of Muzaffar Khān was appointed ruler of this part with the title of Nawāb of Mankerā, defeating the Kalhora chief in a battle.

Ranjīt Singh took Multān, Muzaffargarh, and Khāngarh in 1818, Dera Ghāzi Khān in 1819, and Mankerā in 1821; and the northern part of the District passed under the rule of the Sikhs, being administered partly from Mankerā, and partly from Multān by Dīwān Sāwan Mal. The southern half, however, still remained in the hands of the Bahāwalpur Nawābs, who accepted a lease of their conquests from the Sikh Mahārājā; but when the Nawāb failed to remit the annual amount in 1830, Ranjīt Singh sent General Ventura to take charge of his conquests, and the river Sutlej was accepted as the boundary between the Sikh kingdom and the territories of Bahāwalpur. The whole of the present District was then united under Sāwan Mal. He was succeeded in 1844 by his son Mūlrāj, and the Sikh supremacy remained unshaken until the Multān rebellion and the annexation of the Punjab in 1849. At the first division of the Province for administrative purposes by the British authorities, the town of Khāngarh, 11 miles south of Muzaffargarh, was selected as the head-quarters of a District, but was abandoned in favour of Muzaffargarh. Subsequent transfers of territory to and from Leiah and Jhang brought the District into its present shape in 1861; and the name was then changed from Khāngarh to Muzaffargarh.

The principal remains of antiquarian interest are the tombs of Nawāb Tāhir Khān Nāhar at SĪTPUR, and of Abdul Wahhāb Dīn Panāh (*ob.* 1603) at DAIRĀ DĪN PANĀH. The former, which dates from the fifteenth century, is a fine specimen of the late Pathān style.

Population.

The population at the last three enumerations was: (1881) 338,605, (1891) 381,095, and (1901) 405,656, dwelling in 4 towns and 700 villages. During the last decade the population increased by 6·4 per cent. The District is divided into three *tahsīls*—MUZAFFARGARH, ALĪPUR, and SANĀWĀN—the head-quarters of each being at the place from which it is named. The towns are the municipalities of MUZAFFARGARH, the administrative head-quarters of the District, KHĀNGARH, ALĪPUR, and KHAIRPUR.

The following table shows the chief statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Muzaffargarh	913	2	378	174,970	191·6	+ 6·2	6,226
Sanāwān	1,321	...	140	100,091	75·8	+ 6·2	3,343
Alīpur	921	2	182	130,595	141·8	+ 7·0	5,087
District total	3,635	4	700	405,656	111·6	+ 6·4	14,656

NOTE.—The figures for the areas of *tahsīls* are taken from revenue returns. The total District area is that given in the *Census Report*.

Muhammadans number 350,177, or over 86 per cent. of the total; Hindus, 52,221; and Sikhs, 3,225. The density of population is very low. The language of the people is a form of Western Punjābi.

The most numerous tribe is that of the agricultural Jāts, who number 117,000, or 29 per cent. of the total population. Next to them come the Baloch (77,000). Other important agricultural castes are the Rājputs (17,000) and Arains (9,000). Saiyids number 8,000. The Aroras (36,000) are the only commercial and money-lending class of importance, the Khattrīs being very few. Of the artisan classes, the Mochīs (shoemakers and leather-workers, 13,000), Julāhās (weavers, 12,000), Tarkhāns (carpenters, 10,000), and Kumhārs (potters, 7,000) are the most important; and of the menial classes, the sweepers, mostly known as Kutānas (16,000), and Dhobis, known as Charhoas (washermen, 8,000). The District being surrounded by rivers, the Mallāhs (boatmen) are numerically strong, numbering 10,000. Other tribes worth mention are the Mahtams (4,000), mostly Hindus; Ods (3,000), a wandering caste living by labour in the fields; Marechas (800), a class of wandering beggars from Mārwār and Bikaner, found in this District in larger numbers than elsewhere; and Kehals (600), a vagrant fishing tribe found only here and in Dera Ghāzi Khān. The District contained 17 native Christians in 1901. About 58 per cent. of the population are supported by agriculture.

Agriculture.

The soil consists chiefly of alluvial loam, more or less mixed with sand, and interspersed with patches of clay, sand, and salt-impregnated soil. On the whole it is uniformly good, but agricultural conditions depend, not on distinctions of soil, but on facilities for irrigation. The District has practically no unirrigated cultivation, and from an agricultural point of view may be regarded as falling into three divisions: the alluvial tract, the canal tract, and that irrigated by wells.

The land is held almost entirely on the *bhaiyāchārā* and *zamīndāri* tenures. The area for which details are available from the revenue records of 1903–4 is 3,157 square miles, as shown below :—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Muzaffargarh .	912	317	250	409
Sanāwan . .	1,321	212	176	1,015
Alīpur . .	924	287	189	400
Total	3,157	816	615	1,824

Wheat is the chief crop of the spring harvest, covering in 1903–4 365 square miles ; barley covered 21 square miles, and gram 33. Rice and spiked millet (*bājra*) are the principal food-crops of the autumn harvest, covering 51 and 29 square miles respectively ; while pulses covered 39 square miles, indigo 28, cotton 36, and great millet (*jowār*) 24.

In the twenty-two years following the settlement of 1873–80 the cultivated area increased by 28 per cent., chiefly owing to the extension of canal-irrigation. Nothing has been done to improve the quality of the crops grown. The tendency is for the cultivation of indigo and cotton to decline, and for rice to take their place. Loans for the construction of wells are popular, and over Rs. 16,000 was advanced during the five years ending 1903–4 under the Land Improvement Loans Act.

Muzaffargarh is not a cattle-breeding District, the local breed being distinctly inferior, and cattle are bought from Dera Ghāzi Khān, Sind, and Bahāwalpur. An annual cattle fair is held at Muzaffargarh. The mares of the District are above the average and show traces of the Baloch strain ; four pony and five donkey stallions are maintained by the District board. A considerable number of sheep and goats are kept. About 9,000 camels were registered at the cattle enumeration of 1904.

Of the total area cultivated in 1903–4, 615 square miles, or 75 per cent., were classed as irrigated. Of this area, 84 square miles were irrigated from wells, 218 from wells and canals, 276 from canals, and 37 from channels and tanks. The remaining 25 per cent. of the cultivated area is subject to inundation from the Indus and Chenāb. The canal-irrigation is from the system known as the MUZAFFARGARH INUNDATION CANALS, taking off from the Indus and Chenāb. As these flow only while the rivers are in flood, they are largely supplemented by wells, of which 15,719 were in use, all worked with Persian wheels by cattle. Irrigation from creeks and tanks is carried on by means of water-lifts, there being 3,066 water-lifts and temporary wells.

The District contains 73 square miles of 'unclassed' forest under the Deputy-Conservator of the Multān Forest division, and 403 square

miles of 'unclassed' forest and Government waste under the Deputy-Commissioner. These forests consist chiefly of a light growth of *Populus euphratica* and *jand*, with dense jungles of long grass. The date-palm is common and supplies a staple food to the people during part of the year, besides furnishing a considerable revenue to Government from the tax paid on each tree. There are also large mango groves.

The District produces no minerals of importance; earth-salt used to be manufactured, but this is now prohibited, and the production of saltpetre is also extinct.

Trade and communications.

Muzaffargarh is not remarkable for its industries. Ordinary cotton cloth is woven, and mats and baskets are largely made from the leaves of the dwarf-palm. Sītpur used to be noted for decorated bows, which are now produced at Kot Addu in the Sanāwān *tahsīl*. Snuff is manufactured at Alīpur. The District contains two cotton-ginning and rice-husking factories, to one of which a cotton-press is attached; in 1904, 128 hands were employed.

The chief exports of the District are wheat, sugar, cotton, indigo, *ghī*, dates, and mangoes; and the chief imports are piece-goods, metals, salt, and lime. Trade is chiefly in the hands of Multān dealers, who export the surplus produce either down the river to Sukkur or by rail to Multān. A fair amount of trade used to be carried on by Powinda merchants with Afghānistān and Central Asia, but this is now almost extinct owing to the prohibitive duties imposed in Afghānistān.

The North-Western Railway enters the District from Multān by a bridge over the Chenāb, and turns northwards, running along the Indus bank. A branch runs to Ghāzi Ghāt, between which and Dera Ghāzi Khān communication is maintained by means of a bridge of boats in winter and a steam ferry in summer. The total length of metalled roads is 25 miles, and of unmetalled roads 559 miles. Of these, 17 miles of metalled and 24 miles of unmetalled roads are under the Public Works department, and the rest are maintained by the District board. There is a good deal of river traffic on the Indus, which is crossed by 16 ferries, the Chenāb being crossed by 19.

Owing to the fact that all the cultivation is irrigated, Muzaffargarh may be regarded as practically immune from famine. The area of crops matured in the District in the famine year 1899–1900 was 84 per cent. of the normal.

Administration.

The District is in charge of a Deputy-Commissioner, aided by four Assistant or Extra-Assistant Commissioners, of whom one is in charge of the District treasury. It is divided into three *tahsīls*—MUZAFFARGARH, ALĪPUR, and SANĀWĀN—each under a *tahsīldār*, assisted by two *naib-tahsīldārs* in each of the

first two, and by one in the last-named *tahsīl*. Muzaffargarh town is the head-quarters of an Executive Engineer of the Canal department.

The Deputy-Commissioner as District Magistrate is responsible for criminal justice; civil judicial work is under a District Judge; and both officers are supervised by the Divisional Judge of the Multān Civil Division, who is also Sessions Judge. There are three Munsifs, two at head-quarters and one at Alīpur. The predominant forms of crime are cattle-theft and burglary.

Little is known of the revenue system of the various rulers before the time of Dīwān Sāwan Mal. By 1820 the Sikhs held the whole of the District, and in 1829 it came under Sāwan Mal, who exacted a large revenue, but kept the people contented. In 1859 the Sanāwān *tahsīl* was added to the District, which assumed its present shape in 1861.

The first summary assessment was pitched too high. It had been framed by valuing the weight of wheat taken by the Sikhs at Rs. 1-8 per maund; but the price soon fell to 10 and 12 annas per maund, and large remissions had to be allowed. In 1854 the second summary settlement began. A reduction of 10½ per cent. was made in Sanāwān, while in Muzaffargarh and Alīpur increases were taken of 6 and 21 per cent. respectively. Good seasons were believed to justify the increase of an assessment which had already proved to be excessive. In less than two years it broke down, and a third summary settlement was made, reducing the revenue in Sanāwān still further, and that of the other *tahsīls* to their first assessment. This settlement was badly worked, the canals were never cleared from 1849 to 1876, and the revenue was never redistributed.

The regular settlement began in 1873 and was completed in 1880. Including grazing dues and the assessment on date-palms, the new demand was 5¾ lakhs. Most of the revenue was fixed, but fluctuating assessments were sanctioned for the riverain circles. A revised settlement, undertaken in 1897 and finished in 1903, resulted in an increase of about Rs. 1,25,000. Nearly half the assessment is now fluctuating, crop rates varying between Rs. 2-4 and 6 annas being imposed on matured crops, in addition to a lump sum on each well. The demand (including cesses) for 1903-4 amounted to 8·5 lakhs. The average size of a proprietary holding is about 7 acres (cultivated).

The collections of land revenue alone and of total revenue are shown below, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	5,86	6,19	5,90	6,93
Total revenue . .	7,00	7,68	8,42	9,37

The District contains four municipalities: MUZAFFARGARH, KHĀN-

GARH, ALĪPUR, and KHAIRPUR. Outside these, local affairs are managed by the District board. A local rate supplies the greater part of the board's income, which in 1903-4 amounted to Rs. 67,000. The expenditure in the same year was Rs. 71,000, public works forming the principal item.

The regular police force consists of 397 of all ranks, in charge of a Superintendent, who usually has four inspectors under him. Village watchmen number 489. There are fourteen police stations, one outpost, and four road-posts. The District has no jail, convicted prisoners being sent to Multān.

Muzaffargarh stands eighteenth among the twenty-eight Districts of the Province in respect of the literacy of its population. In 1901 the proportion of literate persons was 3·6 per cent. (6·5 males and 0·2 females). The number of pupils under instruction was 1,612 in 1880-1, 3,587 in 1890-1, 4,194 in 1900-1, and 4,106 in 1903-4. In the last year there were one special, 3 secondary, and 58 primary (public) schools, with 14 advanced and 86 elementary (private) schools, the public schools returning 108 girls and the private schools 309. In 1903-4 the expenditure on education was Rs. 24,000, the greater part of which was met by Local funds.

Besides the civil hospital, the District possesses six outlying dispensaries. In 1904 a total of 91,878 out-patients and 1,213 in-patients were treated, and 3,598 operations were performed. The expenditure was Rs. 14,000, mainly derived from Local funds.

The number of successful vaccinations in 1903-4 was 12,082, representing 29·8 per 1,000 of the population.

[D. C. J. Ibbetson, *District Gazetteer* (1883-4); Hari Kishan Kaul, *Settlement Report* (1904); and *Customary Law of the Muzaffargarh District* (1903).]

Muzaffargarh Tahsīl.—Central *tahsīl* of Muzaffargarh District, Punjab, lying between 29° 54′ and 30° 15′ N. and 70° 51′ and 71° 21′ E., with an area of 912 square miles. Its western boundary is the Indus, and its eastern, which is nearly twice as long, the Chenāb. It includes a long narrow strip of country lying between the Sanāwān *tahsīl* and the right bank of the Chenāb. South of the Sanāwān *tahsīl*, it extends from the Chenāb on the east to the Indus on the west. It is for the most part low-lying, though less subject to flooding than the other *tahsīls*, and is irrigated in the hot season by inundation canals. The population in 1901 was 174,970, compared with 164,782 in 1891. It contains the towns of MUZAFFARGARH (population, 4,018), the headquarters, and KHĀNGARH (3,621); and 378 villages. The land revenue and cesses in 1903-4 amounted to 3·9 lakhs.

Muzaffargarh Town.—Head-quarters of the District and *tahsīl* of Muzaffargarh, Punjab, situated in 30° 4′ N. and 71° 12′ E., in the apex

of the Sind-Sāgar Doāb, on the metalled road from Multān to Dera Ghāzi Khān and on the North-Western Railway. Population (1901), 4,018. Nawāb Muzaffar Khān, the Sadozai governor of Multān, built a fort here in 1794-6, which Ranjīt Singh took by storm in 1818. The town also contains a mosque built by Muzaffar Khān. It became the head-quarters of the District in 1859, when Khāngarh was abandoned. The fort of Muzaffar Khān is formed by a circular-shaped wall 30 feet high, enclosing a space with a diameter of 160 yards, while the suburbs, which surround it on all sides, nearly conceal it from view. The wall has sixteen bastions and battlements all round. The municipality was created in 1873. The income and expenditure during the ten years ending 1902-3 averaged Rs. 10,800 and Rs. 10,700 respectively. The income in 1903-4 was Rs. 14,000, chiefly from octroi; and the expenditure was Rs. 14,300. The town contains an Anglo-vernacular high school maintained by Government, a civil hospital, and a cotton-ginning and pressing and rice-husking factory, with 103 employés in 1904.

Muzaffargarh Canals.—An Imperial system of inundation canals in the Punjab, taking off from the left bank of the Indus and the right bank of the Chenāb, and irrigating portions of Muzaffargarh District. They were for the most part constructed by the native rulers of the District, and improved by Sāwan Mal, governor under Ranjīt Singh. After annexation the canals remained for many years under the management of the Deputy-Commissioner, and were transferred to the Canal department as a 'minor' work in 1880. The system of canal clearance by the labour of the cultivators was finally abolished in 1903, when occupiers' rates were introduced. The Indus series, which is by far the more important of the two, consists of eight canals with an aggregate length of 1,138 miles of main, branch, and distributary channels, and a total average discharge of 2,570 cubic feet per second. There are five canals in the Chenāb series, with a total length of 232 miles, and a discharge of 740 cubic feet per second. The gross area commanded by the canals is 1,205 square miles, of which 1,055 are cultivable and 547 irrigable, the area irrigated during the five years ending 1903-4 averaging 457 square miles, of which 366 square miles were watered from the Indus. To protect the irrigated country, embankments have been constructed, stretching for 119 miles along the Indus and for 40 miles along the Chenāb. No capital account is kept for the system. The gross revenue in 1903-4 was 6 lakhs and the net revenue 3·3 lakhs.

Muzaffarnagar District.—District in the Meerut Division of the United Provinces, lying between 29° 10′ and 29° 45′ N. and 77° 2′ and 78° 7′ E., with an area of 1,666 square miles. On the north it is bounded by Sahāranpur District, and on the south by Meerut, while the Ganges separates it on the east from Bijnor, and the Jumna on the west from the Punjab District of Karnāl. Muzaffarnagar consists of

a central elevated tract, flanked on either side by the low-lying land or *khādar* of the Ganges and Jumna. The Ganges *khādar* is a precarious tract of moist land with scanty cultivation, but generally covered with coarse grass and occasional patches of tamarisk. The northern portion, included in the Gordhanpur *pargana*, is especially liable to flooding from the SOLĀNI river, which is increased by percolation from the Upper Ganges Canal. Drains and dams have been constructed with but little success, and the *khādar* is chiefly valuable as a grazing ground. The Jumna *khādar* is less swampy, but is equally poor, and much of it is covered with *dhāk* jungle (*Butea frondosa*). The uplands are divided into four tracts by four rivers flowing from north to south. On the east is the large tract lying between the old high bank of the Ganges and the WEST KĀLĪ NADĪ, which is watered by the Upper Ganges Canal. This tract is generally fertile, but is crossed by a sandy ridge, and suffers from excessive moisture near the Kālī Nadī. Between this river and the HINDAN lies another fertile tract, which was immensely improved by the opening of the Deoband branch of the Ganges Canal in 1880, as the spring-level is very low. This area is less sandy than the first, but is crossed by one well-defined belt of sand. West of the Hindan, sand is comparatively rare; and the tract between this river and the Karsunī or Krishnī is uniformly good in the centre, though less fertile in the north and south. Between the Karsunī and Kathā, which marks the beginning of the Jumna tract, lies an area which is flourishing in the south, but inferior in the north, where population is scarce. This tract is watered by the Eastern Jumna Canal.

Physical aspects.

The District consists entirely of the Gangetic alluvium, which varies from fine sand to stiff clay.

The botany of the District presents no peculiarities. In the north-west corner *dhāk* jungle is abundant. About 16 square miles are under groves, the mango, pomegranate, and guava being the favourite trees. *Shīsham*, *jamun*, and *siras* are the most common species in avenues. Thatching-grass is abundant, but its use is giving way to that of tiles.

Wolves are fairly common, and wild hog swarm in the *khādar* and near the canals. Hog deer are also found near swampy land, and leopards are occasionally seen. Tigers, which were formerly common, are now very rare.

The climate is comparatively cool, owing to the proximity of the hills, and the mean temperature is about 76°. There can be no reasonable doubt that the wide extension of irrigation has had a prejudicial effect on the climate, and its stoppage near towns has occasionally been necessary in the interest of the public health.

The rainfall over a long series of years has averaged 33 inches,

increasing gradually from 30 inches in the west to about 37 inches in the east. Large variations from the normal are not very common.

History.

Tradition represents Muzaffarnagar as having formed a portion of the Pāndava kingdom, which had its capital at Hastināpur in the adjoining District of Meerut, and at a more historical date as being included in the dominions of Prithwī Rāj, the Chauhān ruler of Delhi. Authentic history first shows us the country around Muzaffarnagar at the time of the Musalmān conquest in the thirteenth century, and it remained a dependency of the various dynasties which ruled at Delhi until the final dissolution of the Mughal empire. The earliest colonists probably consisted of Aryan settlers, Brāhman and Rājput. They were succeeded by the Jāts, who occupied the whole southern portion of the District, where their descendants still form the chief landowning class. At a later date, the Gūjars took possession of the poorer tracts which the Jāts had left unoccupied, and they, too, are still to be found as *zamīndārs*. Finally, with the Muhammadan irruptions, bodies of Shaikhs, Saiyids, and Pathāns entered Muzaffarnagar, and parcelled out among themselves the remainder of the territory.

Tīmūr paid one of his sanguinary visits to the District in 1399, when all the infidel inhabitants whom he could capture were mercilessly put to the sword. Under Akbar, Muzaffarnagar was included in the *sarkār* of Sahāranpur. During the seventeenth century, the Saiyid family of Bārha rose to great eminence, and filled many important offices about the court. Their ancestors are said to have settled in Muzaffarnagar about the year 1350, and to have enjoyed the patronage of the Saiyid dynasty which ruled at Delhi in the succeeding century. In 1414 Sultān Khizr Khān conferred the control of Sahāranpur on Saiyid Salīm, the chief of their fraternity; and from that time forward they rose rapidly to territorial power and court influence. Under Akbar and his successors, various branches of the Bārha stock became the leading landowners in the province. They were celebrated as daring military leaders, being employed by the emperors on all services of danger, from the Indus to the Narbadā. It was mainly through their aid that the victory near Agra was won in 1707, by which Bahādur Shāh I made good his claim to the imperial title. The part which they bore in the revolution of 1712, when Farrukh Siyar was elevated to the throne, belongs to the general history of India. As a reward for the important services rendered on that occasion, Saiyid Abdullah was appointed Wazīr of the empire, and Saiyid Husain Alī commander-in-chief. On their fall in 1721, the power of the Bārha family began to wane, until, in 1737, they were almost exterminated, on a pretext of a rebellious design, by their inveterate enemy the Wazīr Kamar-ud-dīn.

During the whole of the disastrous eighteenth century Muzaffarnagar

suffered from the same Sikh incursions which devastated the remainder of the Upper Doāb. The Sikhs were assisted in their raids by the Gūjars, whose semi-nomad life made them ever ready to join in rebellion against the government of the time. As regularly as the crops were cut, Sikh chieftains poured their predatory hordes into the Doāb, and levied an organized blackmail. The country was divided between them into regular circuits, and each chieftain collected requisitions from his own circuit only. It was during this anarchic period that those mud forts began to spring up which became in time so characteristic of the Upper Doāb. In 1788 the District fell into the hands of the Marāthās, under whom the famous military adventurer, George Thomas, endeavoured with some success to prevent the constant raids across the Jumna. The Begam Sumrū of Sardhana in Meerut District held large possessions in the southern *parganas* at the end of the eighteenth century.

After the fall of Alīgarh in 1803, the whole Doāb as far north as the Siwālik Hills came, without a blow, under the power of the British. A final Sikh invasion occurred in the following year, encouraged by the advance of Holkar's forces; but it was promptly suppressed by Colonel Burn, who drove the intruders back across the river.

The first incident which broke the course of civil administration was the Mutiny of 1857. On the news of the outbreak at Meerut, the Magistrate of Muzaffarnagar, who was then in weak health and about to go on leave, issued orders that all the public offices should be closed. This measure naturally produced a general impression that British rule was suspended. At first there was no open rebellion, and the semblance of government was kept up, but plunder and incendiarism went on unmolested. At length, on June 21, the 4th Irregulars rose in revolt and murdered their commanding officer as well as another European, after which they marched off to Shāmlī. Five days later, a party of the 3rd Cavalry arrived at the town; and on July 1 Mr. R. M. Edwards came in from Sahāranpur with a body of Gurkhas, and took charge of the administration. Vigorous measures were at once adopted to repress crime and collect revenue, the good effects of which became quickly apparent. The western *parganas*, however, remained in open revolt; and the rebels of Thāna Bhawan attacked Shāmlī, where they massacred 113 persons in cold blood. Reinforcements shortly after arrived from Meerut; and Thāna Bhawan, being evacuated by the rebels, had its walls and gates razed to the ground. After this occurrence no notable event took place, though the troops were kept perpetually on the move, marching backwards and forwards along the Ganges, and watching the mutineers on the opposite bank. Order was restored long before the end of the Mutiny.

There are no important Hindu buildings, but pious Muhammadans

have erected many mosques and tombs in different parts of the District. Several buildings at KAIRĀNA date from the sixteenth and seventeenth centuries; at Majherā, 18 miles south-east of Muzaffarnagar, there are some sixteenth-century tombs of the Saiyids; and at Ghausgarh, 21 miles north-west, are the remains of a fort built by Najīb Khān, the Rohilla, and a fine mosque erected by his son.

Population.

The District contains 15 towns and 913 villages. Population has risen steadily. The number at the last four enumerations was as follows: (1872) 690,107, (1881) 758,444, (1891) 772,874, and (1901) 877,188. There are four *tahsīls*—MUZAFFARNAGAR, KAIRĀNA, JĀNSATH, and BUDHĀNA—the head-quarters of each being at a town of the same name. The chief towns are the municipalities of MUZAFFARNAGAR, the administrative head-quarters of the District, KAIRĀNA, and KĀNDHLA. The principal statistics of population in 1901 are shown below:—

Tahsīl.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Muzaffarnagar	464	3	264	239,064	515	+ 15.8	6,759
Kairāna	464	5	256	224,679	484	+ 12.3	5,339
Jānsath	451	4	244	216,411	480	+ 11.8	4,995
Budhāna	287	3	149	197,034	686	+ 14.1	5,510
District total	1,666	15	913	877,188	527	+ 13.5	22,603

Budhāna, which has the densest population, has the smallest area of inferior *khādar* land. Between 1891 and 1901 the District shared in the general prosperity of the Upper Doāb, which profited by the high prices in 1896-7, when famine attacked other parts of the Provinces. Hindus number 607,000, or 69 per cent. of the total; Muhammadans, 255,000, or 29 per cent.; and Jains, 10,150, or 1.2 per cent. The number of Aryas is 3,000, and this form of belief is rapidly increasing. More than 99 per cent. of the population speak Hindustāni. A small colony of emigrants from Sind still use Sindī.

Among the Hindus, Chamārs (leather-workers and labourers) number 135,000; followed by the Jāts (83,000), who are excellent cultivators. Kahārs (labourers, cultivators, and fishermen) and Brāhmans, with 47,000 each, come next. Rājputs include 29,000 Hindus and 24,000 Musalmāns; and Baniās 29,000, many of whom are Jains. Among the castes peculiar to the western Districts of the United Provinces are the Jāts; the Gūjars (agriculturists), 31,000; Sainīs (cultivators), 26,000; and Tagās (agriculturists), 10,000. The Bauriyās (726) are a criminal tribe peculiar to this District, the members of which steal and pass

base money all over India. They are confined to a tract in the extreme west of the District, where they were settled by Government. The most numerous Musalmān caste is that of the Julāhās or weavers (29,000); but the Saiyids, who have been referred to in the history of the District, are very influential, though they number only 14,000. Shaikhs number 26,000; Pathāns, 12,000; Telis (oil-pressers), 14,000; and Kassābs (butchers), 14,000. The Jhojhās (8,000) and Gārās (6,000) are excellent cultivators, found chiefly in this District and in Sahāranpur. The population is largely agricultural, 49 per cent. being supported by occupations connected with the land. General labour supports 11 per cent. and personal services 10 per cent.

Out of 1,402 Christians in 1901, natives numbered 1,259, of whom nearly 1,200 were Methodists. These are all recent converts of the American Methodist Mission, which has a branch here. The American Presbyterian Church also commenced work in 1887.

Agriculture.

The most striking feature in the methods of cultivation is the high standard set by the Jāts. Manure is not confined to the area immediately surrounding the village site, but each field of good land is manured in turn. This is largely due to the importance of the sugar-cane crop, which requires much manure and careful cultivation. The injurious saline efflorescence called *reh* is found most abundantly in the Jumna *khādar* and near the Eastern Jumna Canal, and occasionally along the West Kālī Nadī and the Ganges Canal.

The tenures are those found in most parts of the United Provinces. In 1890 there were 1,347 *zamīndāri*, 1,069 *bhaiyāchārā*, and 579 *pattīdāri mahāls*. The principal agricultural statistics for 1903-4 are shown in the following table, areas being in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Muzaffarnagar	464	334	127	47
Kairāna	464	291	131	82
Jānsath	451	307	115	59
Budhāna	287	235	104	12
Total	1,666	1,167	477	200

The most important food-grains are wheat and gram, the areas under which in 1903-4 were 445 and 189 square miles respectively, or 38 and 16 per cent. of the net area cropped. A more valuable crop is, however, sugar-cane, with an area of 110 square miles. Rice, which is increasing in importance, especially in the case of the finer varieties, covered 86 square miles. Cotton is a valuable crop, but was grown on only 22 square miles, chiefly in Budhāna. Indigo cultivation has almost died out.

The development of the canal system—especially the extension of canal-irrigation to the tract between the Kālī Nadī and Hindan—has been an important factor in the agricultural condition; and it has been assisted by drainage operations, which have led to the extension of cultivation by 10,000 acres in the north-west corner of the District alone. The normal area cultivated is about 66 per cent. of the whole. Muzaffarnagar wheat is celebrated throughout the Provinces, and carefully selected seed is exported to other Districts. From 1895 to 1900 loans were freely taken under the Agriculturists' Loans Act, the total being about Rs. 60,000; but the annual advances since then have fallen to about Rs. 1,500 or Rs. 1,000. Advances under the Land Improvement Loans Act amount to only about Rs. 1,000 annually.

The domestic breed of cattle is inferior, and the best cattle are imported from the Punjab. The *khādar* is, however, noted as a grazing ground where breeders bring cattle. Horse-breeding is very popular, and there are about 20 Government stallions and 600 branded mares. Every year in March a large horse show is held at Muzaffarnagar, where about 1,000 animals are exhibited. In 1903 the supervision of horse-breeding in this District was transferred from the Civil Veterinary to the Military Remount department. Rājputs, Jāts, and Gūjars are the chief breeders. Sheep are kept for their wool and meat, and goats for milk and meat.

Few Districts are so well protected by canals as Muzaffarnagar. Almost every part of the upland area is commanded, the western portion by the Eastern Jumna Canal, the centre by the Deoband branch of the Upper Ganges Canal, and the east by the latter main canal and the Anūpshahr branch. More than 1,000 square miles are commanded and 450 could be irrigated annually. In 1903-4, 340 square miles were irrigated by canals and 130 by wells, other sources supplying only 7 square miles. Well-irrigation is especially required in the western tract to supplement the supply from the Eastern Jumna Canal. The usual method of supply is by a leathern bag with a rope and pulley worked by bullocks; but the Persian wheel is used in the west of the District. The Canal department has constructed and maintains more than 500 miles of drains.

The chief mineral product of value is *kankar* or nodular limestone, but this is scarce. *Reh*, a saline efflorescence of varying composition, is used for glass-making and some other purposes.

Trade and communications.

There are few manufactures of importance. Cotton-weaving supports about 3 per cent. of the population. At Kairāna calico-printing is carried on to a small extent for a local market; and ornamental curtains are made there and at a few other places. Good country blankets are manufactured, especially at Gangerū, and are exported. A coarse blue faience

is made at Mīrānpur, but this is inferior to the products of other Districts; papier mâché is prepared in small quantities at the same place. Two small indigo factories are still worked. The use of iron sugar-mills has led to the establishment of dépôts for their supply and repair in many towns.

The most important article of export is wheat, which has obtained a good name and commands a high price in the European market. Nearly 30,000 tons of wheat were exported annually between 1897 and 1901 from Muzaffarnagar and Khataulī stations. Large quantities of unrefined sugar are also exported, usually by railway, but the trade with the Punjab is partly carried on by means of pack-camels. The other exports are rice and oilseeds.

The North-Western Railway from Delhi to Sahāranpur passes through the centre of the District from south to north, and has four stations. The Oudh and Rohilkhand Railway just touches the District in the north-east corner, but hardly affects it. A light railway is under construction from Shāhdara in Meerut District to Sahāranpur, which will tap a rich tract in the west of the District.

There are only 78 miles of metalled roads and 321 miles of unmetalled roads. All but 35 miles are maintained from Local funds. Avenues of trees are kept up along 150 miles. Good village roads are incompatible with easy canal-irrigation, and the local roads are often extremely bad, especially in the northern part of the Jumna Canal tract. They are best in the south of the District. The Ganges *khādar* also has poor communications. The Ganges is crossed by two boat bridges, and there are two main ferries over the Jumna.

The Ganges Canal is used for the transit of grain and timber, but the rivers are little used as means of communication.

Famine.

Nothing is known of the history of famines in Muzaffarnagar before British rule, but it probably suffered less than the Districts farther south in the many severe visitations which devastated the Doāb. Scarcity was felt in 1803, and again in 1824, and famine in 1837, when Rs. 40,000 of revenue was remitted. The Eastern Jumna Canal was opened in 1830, and the Ganges Canal in 1854. Owing chiefly to the latter, the famine of 1860–1 was not much felt. The Anūpshahr branch of the Ganges Canal was, however, commenced as a relief work. In 1868–9 the protection of the canals was even more marked, and large stores of grain existed, while distress was further relieved by the demand for work on the Sind, Punjab, and Delhi (now called the North-Western) Railway. Numbers of immigrants poured in from Bīkaner and Western Rājputāna. Since 1869 the District has practically escaped famine; and high prices in 1877, 1896, and 1900 were a source of profit to the agricultural inhabitants, though immigrants in distressed circumstances were numerous. The

opening of the Deoband branch canal in 1880 has further protected an important tract.

Administration.

The District is divided into four *tahsīls* and seventeen *parganas*. The normal District staff includes, besides the Collector, four Assistants with full powers, one of whom is a Covenanted Civilian, when available, the rest being Deputy-Collectors recruited in India.

There are two Munsifs in the District, which is included in the jurisdiction of the Subordinate Judge of Sahāranpur and in the Civil and Session Judgeship of the same place. Muzaffarnagar has a bad reputation for murders and cattle-theft, while gang dacoities are not uncommon. The Gūjars are particularly turbulent, and the Bauriyās and gipsy tribes—such as Sānsiyās, Kanjars, and Nats—are responsible for many thefts and burglaries. Infanticide was formerly very prevalent, but is not suspected now.

The District was acquired in 1803, and at first part was included in Sahāranpur District, and part administered by the Resident at Delhi. In 1824 the present District was formed by creating a sub-collectorship at Muzaffarnagar, which became a separate District in 1826. The early settlements thus formed part of those for SAHĀRANPUR. Quinquennial settlements were made in 1825 and 1830, the latter being extended till 1840. Operations for the first regular settlement began with measurements in 1836 and 1838, when the soil was classified into circles and average rent-rates were obtained to form the basis of assessment. The rent-rates were really calculated from valuations of produce and the method of division of that produce, as rent was generally paid in kind, and in many villages where the tenure was *bhaiyāchārā* there were no rents, as the co-sharers cultivated practically the whole area. The total demand was 11·2 lakhs, calculated at two-thirds of the rental 'assets,' and the settlement lasted twenty years. War, famine, and pestilence swept over the District before the next settlement operations began in 1860, and the new revenue at half 'assets' remained at 11·2 lakhs. In this settlement rent rates were calculated on an average of the rates paid in previous years. Inquiries were made with a view to making a permanent settlement, which was not granted, and the assessment was raised in various tracts in 1870 when it was found inadequate. The last settlement was completed in 1892 for thirty years, and the revenue was fixed at 15·1 lakhs, rising to 15·6 lakhs. The assessment was based on recorded rents, corrected where necessary; but the area for which rents were not paid was as high as 47·5 per cent. of the total, chiefly owing to the large proprietary cultivation. The revenue amounted to 48 per cent. of the assessable 'assets.' The incidence varied from Rs. 1–3 to Rs. 3–6 per acre, the average being Rs. 2–6.

The collections on account of land revenue and total revenue are shown below, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	12,20	12,18	15,55	15,59
Total revenue . .	15,02	18,01	22,05	21,92

There are three municipalities—MUZAFFARNAGAR, KĀNDHLA, and KAIRĀNA—and eleven towns are administered under Act XX of 1856. In 1903–4 the District board had an income of 1·1 lakhs and an expenditure of 1·4 lakhs. The expenditure on roads and buildings was Rs. 64,000.

The District Superintendent of police is assisted by three inspectors, and is in charge of 75 officers and 296 men of the regular police, besides 209 municipal and town police, and 1,277 village, road, and canal watchmen. The average daily number of prisoners in the District jail in 1903 was 168.

The District takes a medium place in the Provinces as regards the literacy of its population, of whom 2·6 per cent. (4·7 males and 0·1 females) can read and write. In 1880–1 there were 135 schools under Government inspection, attended by 3,779 pupils, and in 1900–1 156 schools with 6,366 pupils. In 1903–4, 194 such schools contained 7,404 pupils including 192 girls, besides 398 private schools with 5,533 scholars, of whom 157 were girls. Of the public schools, 2 were managed by Government and 114 by the District and municipal boards. Out of a total expenditure of Rs. 32,000, Rs. 4,000 was derived from fees and Rs. 28,000 from Local and municipal funds.

In 1903 there were seven hospitals and dispensaries, with accommodation for 65 in-patients. The number of cases treated was 70,000, of whom 1,000 were in-patients, and 4,600 operations were performed. The total expenditure was Rs. 12,600, chiefly met from Local and municipal funds.

In 1903–4, 29,000 persons were vaccinated, representing 33 per 1,000 of the population. Vaccination is compulsory only in the municipalities.

[H. R. Nevill, *District Gazetteer* (1903); J. O. Miller, *Settlement Report* (1892).]

Muzaffarnagar Tahsīl.—Central *tahsīl* of Muzaffarnagar District, United Provinces, stretching north-east to the Ganges, and lying between 29° 22′ and 29° 45′ N. and 77° 27′ and 78° 7′ E., with an area of 464 square miles. It comprises five *parganas*: Muzaffarnagar, Baghra, Charthāwal, Pur Chhapār, and Gordhanpur. The population has risen from 206,496 in 1891 to 239,064 in 1901. The *tahsīl* contains 264 villages and three towns: namely, MUZAFFARNAGAR (popu-

lation, 23,444), the District and *tahsīl* head-quarters, PUR (6,384), and CHARTHĀWAL (6,236). In 1903–4 the demand for land revenue was Rs. 4,03,000, and for cesses Rs. 51,000. The *tahsīl* lies chiefly on the upland area of the District; but *pargana* Gordhanpur, situated in the Ganges *khādar*, is a low-lying swampy tract in a state of chronic depression in spite of attempts to drain it. In 1894 the inhabitants of this *pargana* were removed, owing to the fear that the GOHNĀ LAKE would flood the whole area when it burst; and the tract is still largely waste. The *tahsīl* is irrigated by the Upper Ganges Main Canal and the Deoband branch. In 1903–4 the area under cultivation was 334 square miles, of which 127 were irrigated.

Muzaffarnagar Town.—Head-quarters of the District and *tahsīl* of the same name, United Provinces, situated in 29° 28′ N. and 77° 41′ E., on the main road from Meerut to Roorkee and Hardwar, and on the North-Western Railway. The population is increasing rapidly: (1872) 10,793, (1881) 15,080, (1891) 18,166, and (1901) 23,444. In 1901 Hindus numbered 12,847 and Musalmāns 9,519. The town was founded by the son of Muzaffar Khān, Khān-i-Jahān, in the reign of Shāh Jahān, about 1633, close to the site of an older town known as Sarwart. It remained a place of little importance, until in 1824 it became the head-quarters of a sub-collectorship of Sahāranpur District, and two years later Muzaffarnagar District was formed. It is a closely-built town, crowded with small streets, but is well situated on high land above the Kālī Nadī, to which the drainage is carried. Besides the ordinary offices, there are a town hall, high and middle schools, and male and female hospitals. There are no resident officials besides those of the ordinary District staff. The American Presbyterian and Reformed Methodist Missions have branches here. Muzaffarnagar was constituted a municipality in 1872. The income and expenditure during the ten years ending 1901 averaged Rs. 22,000. In 1903–4 the income was Rs. 35,000, chiefly derived from octroi (Rs. 21,000) and house tax (Rs. 6,000); and the expenditure was Rs. 46,000. A drainage and paving project was completed in 1903 at a cost of more than Rs. 30,000, and the town is now very well drained. The place owes its prosperity largely to the export trade in wheat and sugar, and the only considerable manufacture is that of blankets. Every year in March a horse show is held here. The high school contains 230 pupils, the *tahsīlī* school 160, and a girls' school 35.

Muzaffarpur District.—District in the Patna Division of Bengal, lying between 25° 29′ and 26° 53′ N. and 84° 53′ and 85° 50′ E., with an area of 3,035[1] square miles. It is bounded on the north by the State of Nepāl; on the east by Darbhangā District; on the south

[1] The area shown in the *Census Report* of 1901 is 3,004 square miles. The figures in the text are those ascertained in the recent survey operations.

by the Ganges, which divides it from Patna; and on the west by Champāran and the river Gandak, which separates it from Sāran.

Physical aspects.

The District is an alluvial plain, intersected with streams and for the most part well watered. It is divided by the Bāghmati and Burhī or Little Gandak rivers into three distinct tracts. The country south of the latter is relatively high; but there are slight depressions in places, especially towards the south-east, where there are some lakes, the largest of which is the Tāl Barailā. The *doāb* between the Little Gandak and the Bāghmati is the lowest portion of the District, and is liable to frequent inundations. Here too the continual shifting of the rivers has left a large number of semi-circular lakes. The area north of the Bāghmati running up to the borders of Nepāl is a low-lying marshy plain, traversed at intervals by ridges of higher ground. Of the two boundary streams, the GANGES requires no remark. The other, the Great GANDAK, which joins the Ganges opposite Patna, has no tributaries in this part of its course; in fact, the drainage sets away from it, and the country is protected from inundation by artificial embankments. The lowest discharge of water into the Ganges towards the end of March amounts to 10,391 cubic feet per second; the highest recorded flood volume is 266,000 cubic feet per second. The river is nowhere fordable; it is full of rapids and whirlpools, and is navigable with difficulty. The principal rivers which intersect the District are the Little Gandak, the Bāghmati, the Lakhandai, and the Bayā. The Little Gandak (also known as Harhā, Sikrāna, Burhī Gandak, or the Muzaffarpur river) crosses the boundary from Champāran, 20 miles north-west of Muzaffarpur town, and flows in a south-easterly direction till it leaves the District near Pūsa, 20 miles to the south-east; it ultimately falls into the Ganges opposite Monghyr. The Bāghmati, which rises near Kātmāndu in Nepāl, enters the District 2 miles north of Maniāri Ghāt, and after flowing in a more or less irregular southerly course for some 30 miles, strikes off in a south-easterly direction almost parallel to the Little Gandak, and crossing the District, leaves it near Hātha, 20 miles east of Muzaffarpur. Being a hill stream and flowing on a ridge, it rises very quickly after heavy rains and sometimes causes much damage by overflowing its banks. A portion of the country north of Muzaffarpur town is protected by the Turkī embankment. In the dry season the Bāghmati is fordable and in some places is not more than knee deep. Its tributaries are numerous: the Adhwāra or Little Bāghmati, Lāl Bakyā, Bhurengi, Lakhandai, Dhaus, and Jhīm. Both the Bāghmati and Little Gandak are very liable to change their courses. The Lakhandai enters the District from Nepāl near Itharwa (18 miles north of Sītāmarhi). It is a small stream until it has been joined by the Sauran and Bāsīād. Flowing south it passes through Sītāmarhi, where

it is crossed by a fine bridge, and then continuing in a south-easterly direction, joins the Bāghmati 7 or 8 miles south of the Darbhangā-Muzaffarpur road, which is carried over it by an iron-girder bridge. The stream rises and falls very quickly, and its current is rapid. The Bayā issues out of the Gandak near Sāhibganj (34 miles north-west of Muzaffarpur town), and flows in a south-easterly direction, leaving the District at Bājitpur 30 miles south of Muzaffarpur town. The head of the stream is apt to silt up, but is at present open. The Bayā is largely fed by drainage from the marshes, and attains its greatest height when the Gandak and the Ganges are both in flood; it joins the latter river a few miles south of Dalsingh Sarai in Darbhangā District.

The most important of the minor streams are the Purāna Dar Bāghmati (an old bed of the Bāghmati stretching from Māllāhi on the frontier to Belānpur Ghāt, where it joins the present stream) and the Adhwāra. These flow southwards from Nepāl, and are invaluable for irrigation in years of drought, when numerous dams are thrown across them. The largest sheet of water in the District is the Tāl Barailā in the south; its area is about 20 square miles, and it is the haunt of innumerable wild duck and other water-fowl.

The soil of the District is old alluvium; beds of *kankar* or nodular limestone of an inferior quality are occasionally found.

The District contains no forests; and except for a few very small patches of jungle, of which the chief constituents are the red cotton-tree (*Bombax malabaricum*), *khair* (*Acacia Catechu*), and *sissū* (*Dalbergia Sissoo*), with an undergrowth of euphorbiaceous and urticaceous shrubs and tree weeds, and occasional large stretches of grass land interspersed with smaller spots of *ūsar*, the ground is under close cultivation, and besides the crops carries only a few field-weeds. Near villages small shrubberies may be found containing mango, *sissū*, *Eugenia Jambolana*, various species of *Ficus*, an occasional tamarind, and a few other semi-spontaneous and more or less useful species. The numerous and extensive mango groves form one of the most striking features of the District. Both the palmyra (*Borassus flabellifer*) and the date-palm (*Phoenix sylvestris*) occur planted and at times self-sown, but neither in great abundance. The field and roadside weeds include various grasses and sedges, chiefly species of *Panicum* and *Cyperus*; in waste corners and on railway embankments thickets of *sissū*, derived from both seeds and root-suckers, very rapidly appear. The sluggish streams and ponds are filled with water-weeds, the sides being often fringed by reedy grasses and bulrushes, with occasionally tamarisk bushes intermixed.

The advance of civilization has driven back the larger animals into the jungles of Nepāl, and the District now contains no wild beasts except hog and a few wolves and *nīlgai*. Crocodiles infest some of

the rivers. Snakes abound, the most common being the *karait* (*Bungarus caeruleus*) and *gohuman* or cobra (*Naia tripudians*).

Dry westerly winds are experienced in the hot season, but the temperature is not excessive. The mean maximum ranges from 73° in January to 97° in April and May, and falls to 74° in December, the temperature dropping rapidly in November and December. The mean minimum varies from 49° in January to 79° in June, July, and August. The annual rainfall averages 46 inches, of which 7·4 inches fall in June, 12·4 in July, 11·3 in August, and 7·6 in September; cyclonic storms are apt to move northwards into the District in the two last-named months. Humidity at Muzaffarpur is on an average 67 per cent. in March, 66 in April, and 76 in May, and varies from 84 to 91 per cent. in other months.

One of the marked peculiarities of the rivers and streams of this part of the country is that they flow on ridges raised above the surrounding country by the silt which they have brought down. Muzaffarpur District is thus subject to severe and widespread inundations from their overflow. In 1788 a disastrous flood occurred which, it was estimated, damaged one-fifth of the area sown with winter crops, while so many cattle died of disease that the cultivation of the remaining area was seriously hampered. The Great Gandak, which was formerly quite unfettered towards the east, used regularly to flood the country along its banks and not infrequently swept across the southern half of the District. From the beginning of the nineteenth century attempts were made to raise an embankment strong enough to protect the country from inundation, but without success, until in the famine of 1874 the existing embankment was strengthened and extended, thus effectually checking the incursions of the river. The tract on the south of the Bāghmati is also partially protected by an embankment first raised in 1810, but the *doāb* between the Bāghmati and the Little Gandak is still liable to inundation. Heavy floods occurred in 1795, 1867, 1871, 1883, and 1898. Another severe flood visited the north of the District in August, 1902. The town of Sītāmarhi and the *doāb* between the Little Gandak and the Bāghmati suffered severely, and it was reported that 60 lives were lost and 14,000 houses damaged or destroyed, while a large number of cattle were drowned. In Sītāmarhi itself 700 houses were damaged and 12,000 maunds of grain destroyed, and it was estimated that half of the maize crop and almost half of the *maruā* crop were lost. Muzaffarpur town, which formerly suffered severely from these floods, is now protected by an embankment. One of the most disastrous floods known in the history of Muzaffarpur occurred in 1906, when the area inundated comprised a quarter of the whole District: namely, 750 square miles and over 1,000 villages. Great distress ensued among the cultivators, and relief measures were necessitated.

In ancient times the north of the District formed part of the old kingdom of MITHILĀ, while the south corresponded to VAISĀLĪ, the capital of which was probably at BASĀRH in the Lālganj *thāna*. Mithilā passed successively under the Pāl and the Sen dynasties, and was conquered by Muhammad-i-Bakhtyar Khiljī in 1203. From the middle of the fourteenth century it was ruled by a line of Brāhman kings, until it was incorporated in the Mughal empire in 1556. Under the Mughals, Hājīpur and Tirhut were separate *sarkārs*; and the town of HĀJĪPUR, which was then a place of strategical importance owing to its position at the confluence of the Ganges and the Gandak, was the scene of several rebellions. After the acquisition by the British of the Dīwāni of Bengal, Bihār, and Orissa in 1765, *Sūbah* Bihār was retained as an independent revenue division, and in 1782 Tirhut (including Hājīpur) was made into a separate Collectorate. This was split up in 1875 into the two existing Districts of Muzaffarpur and Darbhangā. During the Mutiny of 1857 a small number of native troops at Muzaffarpur town rose, plundered the Collector's house and attacked the treasury and jail, but were driven off by the police and decamped towards Siwān in Sāran District without causing any further disturbance.

History.

Archaeological interest centres round BASĀRH, which has plausibly been identified as the capital of the ancient kingdom of Vaisālī.

The population of the present area increased from 2,246,752 in 1872 to 2,583,404 in 1881, to 2,712,857 in 1891, and to 2,754,790 in 1901. The recorded growth between 1872 and 1881 was due in part to the defects in the Census of 1872. The District is very healthy, except perhaps in the country to the north of the Bāghmati, which is more marshy than that to the south of it. Deaf-mutism is prevalent along the course of the Burhī Gandak and Bāghmati rivers.

Population.

The principal statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Muzaffarpur .	1,221	1	1,712	1,050,027	860	− 2·3	45,871
Sītāmarhi .	1,016	1	996	986,582	971	+ 6·7	29,992
Hājīpur . .	798	2	1,412	718,181	900	+ 0·6	31,702
District total	3,035	4	4,120	2,754,790	908	+ 1·5	107,565

The four towns are MUZAFFARPUR, the head-quarters, HĀJĪPUR, LĀLGANJ, and SĪTĀMARHI. Muzaffarpur is more densely populated

than any other District in Bengal. The inhabitants are very evenly distributed; in only a small tract to the west does the density per square mile fall below 900, while in no part of the District does it exceed 1,000. Every *thāna* in the great rice-growing tract north of the Bāghmati showed an increase of population at the last Census, while every *thāna* south of that river, except Hājīpur on the extreme south, showed a decrease. In the former tract population has been growing steadily since the first Census in 1872, and it attracts settlers both from Nepāl and from the south of the District. The progress has been greatest in the Sītāmarhi and Sheohar *thānas* which march with the Nepāl frontier. A decline in the Muzaffarpur *thāna* is attributed to its having suffered most from cholera epidemics, and to the fact that this tract supplies the majority of the persons who emigrate to Lower Bengal in search of work. The District as a whole loses largely by migration, especially to the metropolitan Districts, Purnea, and North Bengal. The majority of these emigrants are employed as earth-workers and *pālki*-bearers, while others are shopkeepers, domestic servants, constables, peons, &c. The vernacular of the District is the Maithilī dialect of Bihārī. Musalmāns speak a form of Awadhī Hindī known as Shekhoī or Musalmānī. In 1901 Hindus numbered 2,416,415, or 87·71 per cent. of the total population; and Musalmāns 337,641, or 12·26 per cent.

The most numerous Hindu castes are Ahīrs or Goālās (335,000), Bābhans (200,000), Dosādhs (187,000), Rājputs (176,000), Koiris (147,000), Chamārs (136,000), and Kurmīs (126,000); while Brāhmans, Dhānuks, Kāndus, Mallāhs, Nuniās, Tāntis, and Telis each number between 50,000 and 100,000. Of the Muhammadans, 127,000 are Shaikhs and 85,000 Jolāhās, while Dhuniās and Kunjrās are also numerous. Agriculture supports 76·4 per cent. of the population, industries 6·2 per cent., commerce 0·5 per cent., and the professions 0·7 per cent.

Christians number 719, of whom 341 are natives. Four Christian missions are at work in Muzaffarpur town: the German Evangelical Lutheran Mission, founded in 1840, which maintains a primary school for destitute orphans; the American Methodist Episcopal Missionary Society, which possesses two schools; a branch of the Bettiah Roman Catholic Mission; and an independent lady missionary engaged in *zanāna* work.

Agriculture.

The tract south of the Little Gandak is the most fertile and richest portion of the District. The low-lying *doāb* between Little Gandak and the Bāghmati is mainly productive of rice, though *rabi* and *bhadoī* harvests are also reaped. The tract to the north of the Bāghmati contains excellent paddy land, and the staple crop is winter rice, though good *rabi* and *bhadoī* crops

are also raised in parts. In different parts of the District different names are given to the soil, according to the proportions of sand, clay, iron, and saline matter it contains. Ultimately all can be grouped under four heads: *balsundar* (sandy loam); *matiyārī* (clayey soil); *bāngar* (lighter than *matiyārī* and containing an admixture of sand); and lastly patches of *ūsar* (containing the saline efflorescence known as *reh*) found scattered over the District. To the south of the Little Gandak *balsundar* prevails, in the *doāb* the soil is chiefly *matiyārī*, while north of the Bāghmati *bāngar* predominates to the east of the Lakhandai river and *matiyārī* to the west. Rice is chiefly grown on *matiyārī* soil, but it also does well in low-lying *bāngar* lands, and the finer varieties thrive on such lands. Good *rabi* crops of wheat, barley, oats, *rahar*, pulses, oilseeds, and edible roots grow luxuriantly in *balsundar* soil, and to this reason is ascribed the superior fertility of the south of the District. *Bhadoī* crops, especially maize, which cannot stand too much moisture, also prosper in *balsundar*, which quickly absorbs the surplus water. Indigo does best in *balsundar*, but *bāngar* is also suitable.

The chief agricultural statistics for 1903-4 are given below, areas being in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Muzaffarpur . . .	1,221	1,025	76
Sītāmarhi . . .	1,016	897	48
Hājīpur	798	619	46
Total	3,035	2,541	170

It is estimated that 1,075 square miles, or 42 per cent. of the net cultivated area, are twice cropped.

The principal food-crop is rice, grown on 1,200 square miles, of which winter rice covers 1,029 square miles. The greater part of the rice is transplanted. Other food-grains, including pulses, *khesāri*, *chīna*, *rahar*, *kodon*, peas, oats, *masurī*, *sāwān*, *kaunī*, *urd*, *mūng*, *janerā* (*Holcus sorghum*), and *kurthī* (*Dolichos biflorus*) cover 804 square miles. Barley occupies 463 square miles, a larger area than in any other Bengal District; *makai* or maize, another very important crop, 256 square miles; *maruā*, 129 square miles; wheat, 114 square miles; gram, 68 square miles; and miscellaneous food-crops, including *aluā* or yams, *suthnī*, and potatoes, are grown on 122 square miles. Oilseeds, principally linseed, are raised on 86 square miles. Other important crops are indigo, sugar-cane, poppy, tobacco, and thatching-grass. Muzaffarpur is, after Champāran, the chief indigo District in Bengal; but its cultivation here, as elsewhere, is losing ground owing to the

competition of the synthetic dye. European indigo planters have of late been turning their attention to other crops, in particular sugar-cane and rhea. Poppy is cultivated, as in other parts of Bihār, on a system of Government advances; the total area under the crop in 1903-4 was 12,400 acres, and the out-turn was 35 tons of opium. Cow-dung and indigo refuse are used as manure for special crops, such as sugar-cane, tobacco, poppy, and indigo.

Cultivation is far more advanced in the south than in the north of the District; but up to the present there appears to be no indication of any progress or improvement in the method of cultivation, except in the neighbourhood of indigo factories. Over 2 lakhs of rupees was advanced under the Agriculturists' Loans Act on the occasion of the famine of 1896, but otherwise this Act and the Land Improvement Loans Act have been made little use of.

The District has always borne a high reputation for its cattle, and the East India Company used to get draught bullocks for the Ordnance department here. Large numbers of animals are exported every year from the Sītāmarhi subdivision to all parts of North Bihār. It is said that the breed is deteriorating. In the north, floods militate against success in breeding; and in the District as a whole, though there is never an absolute lack of food for cattle even in the driest season, the want of good pasture grounds compels the cultivator to feed his cattle very largely in his *bathān*, or cattle yard. A large cattle fair is held at Sītāmarhi every April.

The total area irrigated is 47 square miles, of which 30 are irrigated from wells, 2 from private canals, 6 from tanks or *āhars*, and 9 from other sources, mainly by damming rivers. There are no Government canals. In the north there is a considerable opening for the *pain* and *āhar* system of irrigation so prevalent in Gayā District, but the want of an artificial water-supply is not great enough to induce the people to provide themselves with it.

Kankar, a nodular limestone of an inferior quality, is found and is used for metalling roads. The District is rich in saliferous earth, and a special caste, the Nuniās, earn a scanty livelihood by extracting saltpetre; 98,000 maunds of saltpetre were produced in 1903-4, the salt educed during the manufacture being 6,000 maunds.

Trade and communications.

Coarse cloth, carpets, pottery, and mats are manufactured; *pālkis*, cart-wheels, and other articles of general use are made by carpenters in the south, and rough cutlery at Lāwārpur. But by far the most important industry is the manufacture of indigo. Indigo was a product of North Bihār long before the advent of the British, but its cultivation by European methods appears to have been started by Mr. Grand, Collector of Tirhut, in 1782. In 1788 there were five Europeans in possession

of indigo works. In 1793 the number of factories in the District had increased to nine, situated at Daudpur, Sarahiā Dhūli, Atharshāhpur, Kantai, Motīpur, Deoria, and Bhawāra. In 1850 the Revenue Surveyor found 86 factories in Tirhut, several of which were then used for the manufacture of sugar and were subsequently converted into indigo concerns. In 1897 the Settlement officer enumerated 23 head factories, with an average of 3 outworks under each, connected with the Bihār Indigo Planters' Association, besides 9 independent factories. The area under indigo had till then been steadily on the increase, reaching in that year 87,258 acres, while the industry was estimated to employ a daily average of 35,000 labourers throughout the year. Since then, owing to the competition of artificial dye, the price of natural indigo has fallen and the area under cultivation has rapidly diminished, being estimated in 1903–4 at 48,000 acres. Though only about 3 per cent. of the cultivated area is actually sown with indigo, the planters are in the position of landlords over more than a sixth of the District. They are attempting to meet the fall in prices by more scientific methods of cultivation and manufacture, and many concerns now combine the cultivation of other crops with indigo. Indigo is cultivated either by the planter through his servants under the *zirāt* or home-farm system, or else by tenants under what is known as the *āsāmiwār* system (*āsāmi* means a tenant), under the direction of the factory servants; in both cases the plant is cut and carted by the planter. Under the latter system, the planter supplies the seed and occasionally also gives advances to the tenant, which are adjusted at the end of the year. The plant, when cut, is fermented in masonry vats, and oxidized either by beating or by currents of steam. The dye thus precipitated is boiled and dried into cakes. In 1903–4 the out-turn of indigo was 11,405 maunds, valued at 15·97 lakhs.

The recent fall in prices has resulted in the revival of the manufacture of sugar. A company acquired in 1900–1 the indigo estates of Ottur (Athar) and Agrial in Muzaffarpur and Sirāha in Champāran District, for the purpose of cultivating sugar-cane. Cane-crushing mills and sugar-refining plant of the most modern type were erected at those places and also at Barhoga in Sāran. These factories are capable of crushing 75,000 tons of cane in 100 working days, and of refining about 14,000 tons of sugar during the remainder of the year. Twelve Europeans and 500 to 600 natives a day are employed in the factories during the crushing season, and 10 Europeans and many thousands of natives throughout the year on the cultivation of the estates and the manufacture of sugar. Besides this, the neighbouring planters contract to grow sugar-cane and sell it to the company. It is claimed that the sugar turned out is of the best quality, and a ready sale for it has been found in the towns of Northern India.

The principal exports are indigo, sugar, oilseeds, saltpetre, hides, *ghī*, tobacco, opium, and fruit and vegetables. The main imports are salt, European and Indian cotton piece-goods and hardware, coal and coke, kerosene oil, cereals, such as maize, millets, &c., rice and other food-grains, and indigo seed. Most of the exports find their way to Calcutta. The bulk of the traffic is now carried by the railway; and the old river marts show a tendency to decline, unless they happen to be situated on the line of railway, like Mehnār, Bhagwānpur, and BAIRAGNIĀ, which are steadily growing in importance. Nepāl exports to Muzaffarpur food-grains, oilseeds, timber, skins of sheep, goats, and cattle, and saltpetre; and receives in return sugar, salt, tea, utensils, kerosene oil, spices, and piece-goods. A considerable cart traffic thus goes on from and to Nepāl, and between Sāran and the north of the District. The chief centres of trade are Muzaffarpur town on the Little Gandak (navigable in the rains for boats of about 37 tons up to Muzaffarpur), Hājīpur (a railway centre), Lālganj (a river mart on the Great Gandak), Sītāmarhi (a great rice mart), Bairagniā and Sursand (grain marts for the Nepāl trade), Mehnār, Sāhibganj, Sonbarsā, Belā, Majorganj, Mahuwā, and Kantai. The trade of the District is in the hands of Mārwāris and local Baniyā castes.

The District is served by four distinct branches of the Bengal and North-Western Railway. The first, which connects Simariā Ghāt on the Ganges with Bettiah in Champāran District, runs in a south-easterly direction through Muzaffarpur District, passing the head-quarters town. The second branch enters the District at the Sonpur bridge over the Great Gandak, passes through Hājīpur, and runs eastwards to Katihār in Purnea District, where it joins the Eastern Bengal State Railway; it intersects the first branch at Bāruni junction in Monghyr District. The third runs from Hājīpur to Muzaffarpur town, thus connecting the first two branches. The fourth, which leaves the first-mentioned branch line at Samāstipur in Darbhangā District, enters Muzaffarpur near Kamtaul and passing through Sītāmarhi town has its terminus at Bairagniā. Communication with that place is, however, at present kept open only during the dry season by a temporary bridge over the Bāghmati about 3 miles away; but the construction of a permanent structure is contemplated. The District is well provided with roads, and especially with feeder roads to the railways. Including 542 miles of village tracks, it contains in all 76 miles of metalled and 1,689 miles of unmetalled roads, all of which are maintained by the District board. The most important road is that from Hājīpur through Muzaffarpur and Sītāmarhi towns to Sonbarsā, a large mart on the Nepāl frontier. Important roads also connect Muzaffarpur town with Darbhangā, Motīhāri, and Sāran, 11 main roads in all radiating from Muzaffarpur. The subdivisional head-quarters of Hājīpur and Sītāmarhi are also connected

by good roads with their police *thānas* and outposts. Most of the minor rivers are bridged by masonry structures, while the larger ones are generally crossed by ferries, of which there are 67 in the District. The Little Gandak close to Muzaffarpur town on the Sītāmarhi road is crossed by a pontoon bridge 850 feet in length.

During the rainy season, when the rivers are high, a considerable quantity of traffic is still carried in country boats along the Great and Little Gandak and Bāghmati rivers. *Sāl* timber (*Shorea robusta*) from Nepāl is floated down the two latter, and also a large quantity of bamboos. The Ganges on the south is navigable throughout the year, and a daily service of steamers plies to and from Goalundo.

Famine.

The terrible famine of 1769–70 is supposed to have carried off a third of the entire population of Bengal. Another great famine occurred in 1866, in which it was estimated that 200,000 people died throughout Bihār; this was especially severely felt in the extreme north of the District. Muzaffarpur again suffered severely in the famine of 1874, when deficiency of rain in September, 1873, and its complete cessation in October, led to a serious shortness in the winter rice crop. Relief works were opened about the beginning of 1874. No less than one-seventh of the total population was in receipt of relief. There was some scarcity in 1876, when no relief was actually required; in 1889, when the rice crop again failed and relief was given to about 30,000 persons; and in 1891–2, when on the average 5,000 persons daily were relieved for a period of 19 weeks. Then came the famine of 1896–7, the greatest famine of the nineteenth century. On this occasion, owing to better communications and their improved material condition, the people showed unexpected powers of resistance. Three test works started in the Sītāmarhi subdivision in November, 1896, failed to attract labour, and it was not till the end of January that distress became in any sense acute. The number of persons in receipt of relief then rose rapidly till the end of May, when 59,000 persons with 4,000 dependants were on relief works, and 59,000 more were in receipt of gratuitous relief. The number thus aided increased to 72,000 in July, but the number of relief workers had meanwhile declined, and the famine was over by the end of September. The total expenditure on relief works was 5·64 lakhs and on gratuitous relief 4·91 lakhs, in addition to which large advances were made under the Agriculturists' Loans Act. The import of rice into the District during the famine was nearly 33,000 tons, chiefly Burma rice from Calcutta. The whole of the District suffered severely, except the south of the Hājīpur subdivision, but the brunt of the distress was borne by the Sītāmarhi subdivision.

For administrative purposes the District is divided into three subdivisions, with head-quarters at MUZAFFARPUR, HĀJĪPUR, and SĪTĀ-

MARHI. The staff subordinate to the District Magistrate-Collector at head-quarters consists of a Joint-Magistrate, an Assistant Magistrate, and nine Deputy-Magistrate-Collectors, while the Hājīpur and Sītāmarhi subdivisions are each in charge of an Assistant Magistrate-Collector assisted by a Sub-Deputy-Collector. The Superintending Engineer and the Executive Engineer of the Gandak division are stationed at Muzaffarpur.

Administration.

The civil courts are those of the District Judge (who is also Judge of Champāran), three Sub-Judges and two Munsifs at Muzaffarpur, and one Munsif each at Sītāmarhi and Hājīpur. Criminal courts include those of the District and Sessions Judge and District Magistrate, and the above-mentioned Joint, Assistant, and Deputy-Magistrates. When the District first passed under British rule it was in a very lawless state, overrun by hordes of banditti. This state of affairs has long ceased. The people are, as a rule, peaceful and law-abiding, and heinous offences and crimes of violence are comparatively rare.

At the time of the Permanent Settlement in 1793 the total area of the estates assessed to land revenue in Tirhut was 2,476 square miles, or 40 per cent. only of its area of 6,343 square miles, and the total land revenue was 9·84 lakhs, which gives an incidence of 9 annas per acre; the demand for the estates in Muzaffarpur District alone was 4·36 lakhs. In 1822 operations were undertaken for the resumption of invalid revenue-free grants, the result of which was to add 6·77 lakhs to the revenue roll of Tirhut, of which 3·18 lakhs fell to Muzaffarpur. Owing to partitions and resumptions, the number of estates in Tirhut increased from 1,331 in 1790, of which 799 were in Muzaffarpur, to 5,186 in 1850. Since that date advantage has been taken of the provisions of the partition laws to a most remarkable extent, and by 1904–5 the number of revenue-paying estates had risen to no less than 21,050, a larger number than in any other Bengal District. Of the total, all but 49 with a demand of Rs. 16,735 were permanently settled. The total land revenue demand in the same year was 9·78 lakhs. Owing to the backward state of Tirhut at the time of the Permanent Settlement, the incidence of revenue is only R. 0–9–6 per cultivated acre.

A survey and preparation of a record-of-rights for Muzaffarpur and Champāran Districts, commenced in 1890–1 and successfully completed in 1899–1900, is important as being the first operation of the kind which was undertaken in Bengal for entire Districts which came under the Permanent Settlement. The average size of a ryot's holding in Muzaffarpur was found to be 1·97 acres, and 82 per cent. of them were held by occupancy and settled ryots. Such ryots almost always pay rent in cash, but one-fifth of the non-occupancy ryots and three-fifths of the under-ryots pay produce rents. These are of three kinds, *batai*, *bhaoli*, and *mankhap*; in the first case the actual produce is

divided, generally in equal proportions, between the tenant and the landlord; in the second the crop is appraised in the field and the landlord's share paid in cash or grain; while in the third the tenant agrees to pay so many maunds of grain per *bīgha*. The average rate of rent per acre for all classes of ryots is Rs. 4–0–11. Ryots holding at fixed rates pay Rs. 2–11–11; occupancy ryots, Rs. 3–12–3; non-occupancy ryots, Rs. 4–9–6; and under-ryots, Rs. 4–5–8 per acre. The rent, however, varies not only with the character and situation of the land, but also according to the caste and position of the cultivator, a tenant of a high caste paying less than one of lower social rank. Rents are higher in the south than in the north, where the demand for land has developed at a comparatively recent date. The highest rents of all are paid in the neighbourhood of Hājīpur, where poppy, tobacco, potatoes, &c., are grown on land which is never fallow and often produces four crops a year.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue .	9,75	9,87	9,77	9,77
Total revenue .	17,59	16,94	21,91	22,17

Outside the municipalities of MUZAFFARPUR, HĀJĪPUR, LĀLGANJ, and SĪTĀMARHI, local affairs are managed by the District board, with subordinate local boards in each subdivision. In 1903–4 its income was Rs. 3,31,000, of which Rs. 1,83,000 was derived from rates; and the expenditure was Rs. 3,60,000, the chief item being Rs. 2,69,000 expended on public works.

The most important public works are the Tirhut embankment on the left bank of the Great Gandak, and the Turkī embankment on the south bank of the Bāghmati. The Gandak embankment, which runs for 52 miles from the head of the Bayā river to the confluence of the Gandak and Ganges, and protects 1,250 square miles of country, is maintained by contract. On the expiry of the first contract in 1903, a new contract for its maintenance for a period of twenty years at a cost of 2·08 lakhs was sanctioned by Government. The Turkī embankment, originally built in 1810 by the Kantai Indigo Factory to protect the lands of that concern, was acquired by Government about 1870. It extends from the Turkī weir for 26 miles along the south bank of the Bāghmati, and protects 90 square miles of the *doāb* between that river and the Little Gandak. In 1903–4 Rs. 2,200 was spent on its maintenance.

The District contains 22 police stations and 14 outposts. The force subordinate to the District Superintendent consists of 3 inspectors, 28 sub-inspectors, 47 head constables, and 432 constables; the rural

police force is composed of 238 *daffadārs* and 4,735 *chaukīdārs*. A District jail at Muzaffarpur has accommodation for 465 prisoners, and subsidiary jails at Hājīpur and Sītāmarhi for 38.

The standard of literacy, though higher than elsewhere in North Bihār, is considerably below the average for Bengal, only 3·9 per cent. of the population (7·8 males and 0·3 females) being able to read and write in 1901. The number of pupils under instruction, which was 24,000 in 1880–1, fell to 23,373 in 1892–3, but increased to 29,759 in 1900–1. In 1903–4, 35,084 boys and 1,843 girls were at school, being respectively 17·7 and 0·85 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 1,520, including one Arts college, 20 secondary, 1,013 primary, and 486 special schools. The expenditure on education was 1·55 lakhs, of which Rs. 11,000 was met from Provincial funds, Rs. 53,000 from District funds, Rs. 3,000 from municipal funds, and Rs. 57,000 from fees. The most important institutions are the Bhuinhār Brāhman College and the Government District school at Muzaffarpur town.

In 1903 the District contained five dispensaries, of which three had accommodation for 62 in-patients. The cases of 72,000 out-patients and 800 in-patients were treated, and 4,000 operations were performed. The expenditure was Rs. 13,000, of which Rs. 900 was met from Government contributions, Rs. 5,000 from Local and Rs. 4,000 from municipal funds, and Rs. 3,000 from subscriptions. Besides these, two private dispensaries are maintained, one at Baghi in the head-quarters subdivision and the other at Parihar in the Sītāmarhi subdivision, by the Darbhangā Rāj.

Vaccination is compulsory only in municipal areas. In 1903–4 the number of persons successfully vaccinated was 87,000, representing 32 per 1,000 of the population, or rather less than the average for Bengal.

[L. S. S. O'Malley, *District Gazetteer* (Calcutta, 1907); C. J. Stevenson-Moore, *Settlement Report* (Calcutta, 1900).]

Muzaffarpur Subdivision.—Head-quarters subdivision of Muzaffarpur District, Bengal, lying between 25° 54′ and 26° 28′ N. and 84° 53′ and 85° 45′ E., with an area of 1,221 square miles. It is an alluvial tract, bounded on the west by the Great Gandak and intersected by the Bāghmati and Little Gandak, flowing in a south-easterly direction. The population was 1,050,027 in 1901, compared with 1,074,382 in 1891, the density being 860 persons per square mile. The slight decline in the population is due partly to the Muzaffarpur *thāna* having suffered from cholera epidemics, and partly to the fact that it supplies a large number of emigrant labourers to Lower Bengal. Moreover, the *doāb* between the Bāghmati and the Little Gandak is liable to frequent inundations. The subdivision contains one town, MUZAFFARPUR (population, 45,617), its head-quarters; and 1,712 villages.

Muzaffarpur Town.—Head-quarters of Muzaffarpur District, Bengal, situated in 26° 7′ N. and 85° 24′ E., on the right bank of the Little Gandak. The population, which was 38,241 in 1872, increased to 42,460 in 1881 and to 49,192 in 1891, but fell in 1901 to 45,617, of whom 31,629 were Hindus and 13,492 Muhammadans. The decrease of 9 per cent. at the last Census is to a great extent only apparent; and, but for the exclusion of one of the old wards from the municipal limits, and the temporary absence of a large number of people in connexion with marriage ceremonies, the town would probably have returned at least as many inhabitants as in 1891. Roads radiate from the town in all directions. A considerable trade is carried by the Little Gandak, the channel of which, if slightly improved, would carry boats of 20 tons burden all the year round. Muzaffarpur was constituted a municipality in 1864. The income during the decade ending 1901–2 averaged Rs. 70,000, and the expenditure Rs. 62,000. In 1903–4 the income was Rs. 83,000, including Rs. 30,000 derived from a tax on houses and lands, Rs. 16,000 from a conservancy rate, Rs. 3,000 from a tax on vehicles, and Rs. 13,000 from tolls. The incidence of taxation was Rs. 1–6–1 per head of the population. In the same year the expenditure also amounted to Rs. 83,000, the chief items being Rs. 3,000 spent on lighting, Rs. 3,000 on drainage, Rs. 29,000 on conservancy, Rs. 6,000 on medical relief, Rs. 11,000 on roads, Rs. 17,000 on buildings, and Rs. 1,400 on education. The town is clean, and the streets in many cases are broad and well kept. It contains, in addition to the usual public buildings, a large new hospital, a dispensary, and several schools, some of the best of which are supported by the Bihār Scientific Society and the Dharmasamāj. In 1899 a college, teaching up to the B.A. standard, was established in Muzaffarpur through the generosity of a local *zamīndār*. The building is large, and the college is in a flourishing condition. The District jail has accommodation for 465 prisoners, who are employed chiefly in the manufacture of mustard oil, castor oil, *darīs*, carpets, matting, aloe fibre, coarse cloth, and dusters. Near the court buildings is a lake formed from an old bed of the river. To prevent the river from reaching it, an embankment has been thrown across the lake towards Daudpur; but in spite of this the river has cut very deeply into the high bank near the circuit-house, and, unless it changes its course, it will probably in time break through the strip of land which at present separates it from the lake. Muzaffarpur is the head-quarters of the Bihār Light Horse Volunteer Corps. At the time of the Mutiny of 1857 a small number of native troops who were stationed here rose, plundered the Collector's house, and attacked the treasury and jail, but were driven off by the police and *najībs* and decamped towards Alīganj Sewān in Sāran District without causing any further disturbance.

Myaing.—Eastern township of Pakokku District, Upper Burma, lying between 21° 24′ and 21° 51′ N. and 94° 33′ and 95° 2′ E., with an area of 825 square miles. The township is undulating in contour, rising gradually towards the Tangyi range of hills that bounds it on the west, and has a very meagre rainfall. The population was 47,111 in 1891, and 71,976 in 1901, distributed in 295 villages. Myaing (population, 610), a village 25 miles north-west of Pakokku, is the head-quarters. The area cultivated in 1903–4 was 215 square miles, and the land revenue and *thathameda* amounted to Rs. 1,53,000.

Myanaung Subdivision.—Northern portion of Henzada District, Lower Burma, occupying about one-third of the whole, and comprising the KANAUNG and KYANGIN townships.

Myanaung Town.—Head-quarters of the subdivision of the same name in the Kanaung township of Henzada District, Lower Burma, situated in 18° 17′ N. and 95° 22′ E., on the western bank of the Irrawaddy, about 8 miles south-east of Kyangin and half-way between it and Kanaung. Population (1901), 6,351. Myanaung is said to have been founded by the Talaings about 1250, and was then called Kudut. Alaungpayā captured and renamed it in 1754. It was formerly the head-quarters of the District, which was then called Myanaung. It was constituted a municipality in 1886. During the ten years ending 1901 the municipal income and expenditure averaged Rs. 18,300 and Rs. 18,500 respectively. In 1903–4 the income was Rs. 19,000, including house tax (Rs. 3,000), market dues, &c. (Rs. 12,700); and the expenditure was Rs. 18,000, the chief items being conservancy (Rs. 4,600), hospital (Rs. 3,000), and roads (Rs. 2,600). The municipality supports a hospital and an Anglo-vernacular school, and contributed Rs. 3,000 to education in 1903–4. The Henzada-Kyangin railway, when constructed, will pass through Myanaung.

Myaung.—Western township of Sagaing District, Upper Burma, lying in the angle formed by the junction of the Irrawaddy and Chindwin rivers, between 21° 35′ and 21° 52′ N. and 95° 12′ and 95° 26′ E., with an area of 246 square miles. The population was 25,270 in 1891, and 31,497 in 1901, distributed in 79 villages. The head-quarters till recently were at Kyaukyit, on the Nabet stream, a waterway connecting the Irrawaddy and Chindwin, but have now been moved eastwards to Myaung (population, 1,016), on the right bank of the Irrawaddy, about 40 miles west of Sagaing town. The area cultivated in 1903–4 was 96 square miles, and the land revenue and *thathameda* amounted to Rs. 1,14,200.

Myaungmya District.—A delta District in the Irrawaddy Division of Lower Burma, lying between 15° 44′ and 16° 55′ N. and 94° 36′ and 95° 35′ E., with an area of 2,663 square miles. In shape a rough parallelogram, the District is bounded on the south by the sea; on the

west by Bassein District; on the east by Pyapon; and on the north by Ma-ubin. It is practically a collection of flat, fertile islands, sundered the one from the other by rivers which wind through the levels in a south-westerly direction, and are connected by countless tidal creeks, mostly navigable. With the exception of a small tract of rising ground 30 miles south-west of Myaungmya town, an offshoot of the Arakan Yoma, the surface of the country is very little above the rise of spring-tides. Towards the south, near the coast, the principal features of the scenery are interminable stretches of mangrove jungle and *dani* palm, which border the mud-banks of the creeks. Farther north, plantain groves take the place of the tidal forests, and, with the pagodas, help to break the monotonous character of the landscape, which otherwise would show little more than a waste of wide rice flats, chequered with strips of grass and tree jungle. Its waterways are the main natural features of Myaungmya. These are all branches of the Irrawaddy, though that name is given only to the channel which runs down the eastern edge of the District, forming the greater portion of the border between it and the District of Pyapon. The Panmawadi, composed of various streams which leave the Irrawaddy in Henzada District, skirts Myaungmya for a considerable distance on its western side before striking off westwards into Bassein, one of its branches, the Thetkethaung, bounding it down to the sea-coast. Right down the centre of the District flows the Pyamalaw river, parallel to the Irrawaddy and Panmawadi, and enters the sea in two branches, named the Pyamalaw and Pyinzalu, midway between them. The Shwelaung river takes off from the Irrawaddy at the north-east corner of the District, and, after forming the northern boundary, turns south at the town of Shwelaung, and flows midway between the Irrawaddy and the Pyamalaw for about 25 miles. Here, combining with a branch of the Irrawaddy, it becomes the Kyunpyatthat river, which, leaning first towards the Pyamalaw river, eventually joins the Irrawaddy about 24 miles from the sea. The Irrawaddy, after forming the eastern boundary of the District for 24 miles, divides into two streams, never more than 5 miles apart, which unite again about 30 miles farther south. The eastern branch retains the name of the Irrawaddy, while the western is known as the Yazudaing. The lesser rivers are the Wakema, 23 miles in length, connecting the Shwelaung and Pyamalaw, and flowing past the rising town of Wakema, and the Einme and Myaungmya, which form a loop from the Panmawadi river nearly 60 miles in length.

Physical aspects.

The soil is composed of alluvial formation, resting on a substratum of black clay. South-west of Myaungmya is a hilly tract, composed of rocks of the Nummulitic group; but beyond this small stretch of upland the country to some depth below the surface is largely a suc-

cession of layers of river silt, brought down from the north within what is geologically a comparatively recent date.

The flora is of the type common to all the delta tracts, which is briefly described under HANTHAWADDY DISTRICT. Tidal and swamp vegetation predominates.

Elephants and tigers are found in the southern and more unreclaimed parts, but the spread of cultivation is reducing their range. Leopards (including the black variety) are found in all parts, and are occasionally trapped, and *sāmbar* and barking-deer are fairly plentiful in the Myaungmya township. Monkeys abound in the southern forests, while in the smaller creeks are numerous crocodiles, driven to these more secluded retreats by the traffic in the larger streams. Along the sea-coast both the turtle and the tortoise are common.

On the whole, the climate, though enervating, is not unhealthy. Proximity to the sea renders it more equable than that of the Districts farther inland. The average minimum temperature is about 65°, and the maximum 95°, the average mean being about 80°. The temperature never rises above 105°. The rainfall is copious and regular, varying locally with the proximity to the coast. The northern townships receive from 70 to 90 inches a year, the southern townships from 90 to 130 inches. Owing to the nature of the surface of the country, certain tracts are regularly inundated during the rains.

The cyclone of May, 1902, unroofed a third of the dwellings in the District, sank many boats with considerable loss of life, and destroyed much stored grain; but visitations of this nature are rare.

History.

The name Myaungmya is said to mean 'pleasant canal,' but this is only the most plausible of various alleged derivations. The District has made no permanent mark in history, and, save in the fourteenth century, the old annals contain no reference to it of importance. In 1387 one Lauk Bya, governor of Myaungmya, is said by the Talaing chroniclers to have raised the standard of revolt against Razadirit, king of Pegu, and to have called in the aid of the king of Ava. The Burmese troops were, however, defeated at Hmawbi, the rebellion was quashed, and Lauk Bya was eventually captured and beheaded. Myaungmya is referred to in the history of the events that followed on this revolt, and in 1410 a Burmese army is said to have made an unsuccessful attack upon the town. But no mention of it is made in later chronicles, and in neither the first nor the second Burmese War did it play an important part. The District is of modern creation, having been formed in 1893 by the combination of the western townships of Thongwa (now Ma-ubin) District with the eastern townships of Bassein District. On the constitution of Pyapon District in 1903, the Pantanaw township of the Wakema (or eastern) subdivision was restored to Ma-ubin District, and

a large circle of the Pyindaye township of the old Thongwa District was added to Myaungmya, the Wakema township being made into a subdivision and divided into two townships, with head-quarters at Wakema and Moulmeingyun.

Population.

Owing to the frequent changes in the boundaries of the District, it is not possible to give accurate statistics of the population in earlier years. In 1881 there were about 85,000 persons in the area now constituting Myaungmya, a total which had risen by 1891 to 185,930. After that date the increase in population was very rapid, owing to immigration, and in 1901 the total stood at 278,119.

The distribution of the population in 1901 over the existing area is given in the following table:—

Township.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Myaungmya .	1,069	1	227	75,343	70	+ 49	19,211
Einme . .	315	...	122	59,367	188	+ 45	13,544
Wakema . .	718	1	194	75,478	105	+ 58*	39,200
Moulmeingyun .	561	...	129	67,931	120		
District total	2,663	2	672	278,119	104	+ 49	71,955

* The Moulmeingyun township was only constituted in 1903.

MYAUNGMYA and WAKEMA are the only towns. The rate of increase is extraordinary in the Wakema township, and throughout the whole District is large. The immigrants come chiefly from the neighbouring District of Bassein, from the dry zone districts on the Irrawaddy, and to a small extent from Mandalay, Shwebo, and Lower Chindwin in Upper Burma. Burmese is spoken by about 190,000 persons, and Karen by about 77,000.

Of the total population, Burmans number about 180,000, and Karens about 78,000. The latter are most thickly distributed in the older cultivation in the north, and still preserve their language. The immigrants from Upper Burma go farther south to make new clearings. About 2,000 persons returned themselves as Talaings in 1901, but only a third of them spoke Talaing. The Indian population is small, numbering 3,400 Musalmāns and 2,000 Hindus. The Christian community, on the other hand, is large, numbering about 12,800, being the largest aggregate in the Province after Rangoon, Bassein, and Toungoo. Two-thirds of the population are directly dependent upon agriculture for a living, and about 3,700 live by *taungya* (shifting) cultivation in the small hilly area of the District.

There are 12,500 native Christians, mostly Karens. More than 9,000 of these belong to the American Baptist Mission, which has stations in the large Karen villages and many village churches. The head-quarters of the Roman Catholic missions are at Myaungmya, Kanazogon, and Kyontalok, where there are substantial churches.

Agriculture.

In all parts except the Myaungmya township the natural conditions—richness of soil, flatness of surface, and timeliness and sufficiency of rainfall—are extremely favourable to agriculture. The soil is an alluvial loam on a substratum of clay, formed by the deposit of silt from the Irrawaddy floods, which inundate a considerable proportion of the District. The only variation in the contour of the land is the gradual slope away from the banks to the interior of the island of cultivation. In consequence of these favourable conditions, practically nothing but rice (*kaukkyi* or wet-season) is grown, though a certain number of plantain groves exist. The system of cultivation is the same as in other parts of Burma, the rice being transplanted from nurseries after the ground has been prepared with the harrow (*tundon*). The plough is often not used at all, the seed being scattered broadcast after the grass has been cut. The gardens usually lie in long narrow strips along the banks of the streams. Manuring is said to be unknown and unattempted, and even the burning of the surface straw is rare.

The chief agricultural statistics for 1903–4 are shown below, areas being in square miles:—

Township.	Total area.	Cultivated.	Forests.
Myaungmya	1,069	205	1,480
Einme	315	170	
Wakema	718	151	
Moulmeingyun	561	273	
Total	2,663	799	1,480

Accurate statistics of the area under cultivation in earlier years cannot be given, owing to the numerous changes in the District boundaries; but in general terms it may be said that about 312 square miles were cultivated in 1881, 437 in 1891, and 711 in 1901. Rice occupied 764 square miles in 1903–4. The area under garden cultivation was 20 square miles, evenly distributed over the various townships, with the exception of Moulmeingyun, where the gardens are confined to the Kyaikpi circle on the eastern bank of the Irrawaddy. Of the total area under orchards, 5,000 acres were devoted to plantain groves. The *dani* palm, used largely for thatching purposes, is most popular in the Myaungmya township, and is grown on 4,100 acres. Almost the only other crop worthy of mention is sugar-cane,

which covers about 550 acres in the Myaungmya and Wakema townships. Sesamum is, however, also cropped to a small extent, and coco-nut palms are fairly plentiful. There are no particular forms of tenure.

Large quantities of cultivable land are taken up each year by the agriculturists of the District and the many immigrants. In 1903 about 39 square miles were ploughed for the first time. The extension cannot be continued for long, as the reservation of forests, grazing grounds, and fishery tracts has had the effect of reducing the available waste land considerably during the past few years. There is nothing to record in the way of improvements in agricultural practice. The provisions of the Land Improvement and Agriculturists' Loans Acts have been made but little use of in recent years, as the large extensions of cultivation have been carried out by capitalists to whom the small sums obtainable under these Acts are no inducement.

Both buffaloes and kine are bred and employed in the fields. Buffaloes are used by Karens and Burmans mostly in the more low-lying tracts, where they thrive better than cattle, and have harder work to do. Ponies are few and can be used only in the north. In the network of creeks which intersects the southern area their employment is out of the question. Except in the Wakema township grazing reserves are ample. In Wakema cultivation has expanded so rapidly during the last decade that the existing reserves are inadequate, but steps are being taken to remedy this defect. During the rains the cattle have to be protected from countless swarms of mosquitoes by the smoke of fires, or even by means of cloth coverings that answer the purpose of a mosquito curtain.

There are no regular irrigation works, and no part of the larger embankment schemes of the delta falls within the limits of the District; but the Shwelaung marginal road (12 miles long) in the extreme north of the Wakema township shelters about 6,000 acres of land. Next to the cultivation of rice, fishing is the chief occupation of the inhabitants. It was even more important in the days when the Pantanaw township formed a portion of the District. The inland fisheries occupy a large portion of the eastern part of the Einme township, and the revenue derived from them in 1903–4 amounted to 1·3 lakhs. A full and interesting description of these fisheries and the methods of working them is contained in a report by Major Maxwell published in 1904. Turtle-banks exist along the coast of the District, of which the two most important are known as the Amatgale and Pyinsalu banks.

The forests are of no great value. Teak is of comparatively rare occurrence, and the mixed forests in which it is found are 'unclassed.' There is a small area of tropical forest in the hilly tract about 40 miles

south-west of Myaungmya. Littoral forests are common in the southern portions, a considerable proportion of the low-lying area round the coast being covered with mangrove jungle, for the most part 'reserved.' The swamp forests lying to the north of these tidal forests form the main rattan-producing tracts of the District. The area of 'reserved' forests is 480 square miles, and of the 'unclassed' area 1,000 square miles. The forest receipts in 1903-4 amounted to Rs. 28,000.

The mineral resources are comparatively meagre. Pottery clay is found in parts of the Einme township, where the poorer classes have taken to pot-making; and laterite is worked for road-metalling in the Myaungmya township, where also limestone is obtained in the hilly areas. The quarries are worked only in the dry season, and the blocks of limestone when extracted are transported by cart or boat some distance to the kilns.

Trade and communications.

With the exception of pottery, which is really only a domestic occupation, there are practically no arts save those that are entirely subsidiary to agriculture. Of industries, the manufacture of salt and *ngapi* may be mentioned. The head-quarters of the salt industry are at the two villages of Sagyin and Ganeik in the south-west of the Myaungmya township, a dozen miles from the sea on the Panmawadi river. Salt is obtained by evaporation, but the product is coarse and is used almost entirely in the local *ngapi* industry. The annual output is about 50,000 maunds, obtained from 14 factories containing 48 cauldrons of a capacity of 40 gallons each. *Ngapi* is fish-paste into which all the large surplus of fish caught in the District is transformed before being sent into the interior of Burma. Many varieties are produced; but the *ngapi* chiefly made here is the *damin* or sea *ngapi*, the head-quarters of the industry being at Labutta, on the right bank of the Ywe river, 20 miles from the coast.

The principal exports are paddy and *ngapi*. The former is carried by boat or steamer to either Rangoon or Bassein, according as the one or the other port is the more accessible. *Ngapi*, on the other hand, is sent to all parts of Burma. The imports comprise every article required by a primitive agricultural or fishing community, such as piece-goods, hardware, kerosene oil, &c.; these commodities are brought by river from Rangoon for the most part. The Irrawaddy Flotilla Company enjoys the larger share of this trade, but native boats also play a conspicuous part in the carrying business.

No railways have been constructed; but the connexion of Myaungmya, Thīgwin, Einme, and Pantanaw (in Ma-ubin District) by means of a light railway is under consideration. The only roads are purely local. Water communications are so plentiful, however, that these deficiencies have so far not been felt; in fact, no village of any size

is situated far from a navigable waterway. The main steamer route from Rangoon to Bassein traverses the District by the cross-streams connecting the Irrawaddy, Pyamalaw, Ywe, and Panmawadi rivers. The steamers stop at Myaungmya, Wakema, and Shwelaung within the limits of the District. In addition, the main trade centres—Shwelaung, Wakema, Kyunpyatthat, Moulmeingyun, Einme, Thīgwin, Myaungmya, and Labutta—are kept in regular communication with each other, and with the towns of the neighbouring Districts of Bassein and Ma-ubin, by services of smaller steamers and launches.

Administration.

The District is divided for administrative purposes into two subdivisions: Myaungmya, comprising the MYAUNGMYA and EINME townships; and Wakema, comprising the WAKEMA and MOULMEINGYUN townships. These administrative areas are in charge of the usual executive officers, under whom are 7 *taik* (or circle) *thugyis* and 673 *ywathugyis* or village headmen. The former are being gradually abolished, their revenue duties being taken over by the village headmen in accordance with the policy pursued by the Government of late years. The Executive Engineer at Myaungmya is in charge of a division comprising Myaungmya, Ma-ubin, and Pyapon Districts. The District, together with Bassein, forms a Forest division, with head-quarters at Bassein.

For some considerable time the executive officers of the District have been almost completely relieved of civil judicial work, and the new judicial scheme is now in force, Myaungmya being the head-quarters of the Divisional and Sessions Judge of the Delta Division. A District Judge has been appointed, and the Deputy-Commissioner has no duties in connexion with civil justice. A subdivisional judge has been appointed for the two subdivisions of the District, and there is a special civil judge for the Myaungmya and Einme townships, while a judge, sitting at Wakema and Moulmeingyun, does the civil work for the two townships of the Wakema subdivision. Crime is of the type common to all the delta Districts of the Province. It has increased of recent years, but not out of proportion to the growth in population.

Under the Burmese régime the revenue system was the same as that obtaining in the other Districts of Lower Burma. A tax was assessed at so much per yoke of oxen or buffaloes, and another impost corresponded more or less to the income tax of modern days. In 1862 acre rates were fixed in the northern portion of the Myaungmya township, and remained in force till 1880–1. They varied from R. 1 to Rs. 2 per acre, the former rate being levied on the exhausted land in the Myaungmya circle. The settlement of the Wakema township was carried out about the same time, and was revised ten years later. The revenue steadily increased, and in 1879–80 the rates were raised by about 25 per cent. in the Myaungmya township, and by 6 to 25 per cent. in

the townships of Wakema and Pantanaw (the latter now in Ma-ubin District). This increase did not check the extension of cultivation, which shows that the higher rates did not press heavily on the people. The northern portions of the Myaungmya and Wakema townships were again brought under settlement in 1888–9, when they were divided into nine assessment tracts (with two soil classes); and the rates then in existence were replaced by rates on rice land varying from R. 1 to Rs. 2–10 per acre, on gardens at Rs. 2–8, and on miscellaneous crops at Rs. 2 per acre. The Einme township (till 1893 part of Bassein District) was assessed in 1854 at rates varying from Rs. 1–8 to Rs. 1–12 per acre. These were modified in 1862, the maximum rate being raised to Rs. 2–8 in a resettlement in 1881–2. The rates fixed in 1881–2 remained in force till 1897–8 in this area. The cultivated lands in the south of the Myaungmya township were settled in 1862, and were not resettled till 1901–2. At the time of resettlement rates in force varied from R. 1 (on the lands nearest the sea) to Rs. 2–10 per acre. On resettlement they were modified as follows. On rice lands the rate ranged from R. 1 (in the extreme south-west corner) to Rs. 3–4 an acre; on miscellaneous cultivation the rate was Rs. 1–8 throughout the tract; on gardens, Rs. 2; on *dani* palms, Rs. 4; on solitary fruit trees, 4 annas each. The northern part of the Myaungmya township and the Einme township were again settled in 1897–8. The lands were reclassified, the village charge being substituted for the *kwin* as the settlement unit, and rates varying from Rs. 1–4 upwards were sanctioned. The maximum rate for garden land in this portion of the District is Rs. 5 per acre on betel-vine and *dani* plantations, and Rs. 2–8 on other garden and miscellaneous cultivation. The settlement of the southern part of the Wakema subdivision was completed in 1902–3, the highest rate sanctioned being Rs. 5 per acre for rice, Rs. 10 for betel-vine, and Rs. 5 for *dani*. The northern part was taken in hand in 1903–4. An ordinary rice holding in the Myaungmya township ranges from 10 to 15 acres in extent, and in the rest of the District from 20 to 25 acres. Owing to the recent formation of the District and the frequent modifications of its boundaries, comparative revenue statistics cannot be given. The land revenue in 1903–4 amounted to 11·7 lakhs, and the capitation tax to 2·5 lakhs; the total revenue was 20 lakhs.

The District cess fund, derived mainly from a 10 per cent. cess on the land revenue, and utilized for various local needs, had an income in 1903–4 of 1·6 lakhs; and the chief items of expenditure were public works (Rs. 48,000) and education (Rs. 18,000). The only municipality in the District is MYAUNGMYA, but WAKEMA is managed by a town committee.

The civil police force is under the orders of the District Superin-

tendent, aided by one Assistant Superintendent and 4 inspectors. The lower grades are made up of 8 head constables, 36 sergeants, and 206 constables, distributed in 12 police stations and 3 outposts. The military police force consists of 3 native officers, 8 *havildārs*, and 162 men, stationed at Myaungmya, at the various township head-quarters, and at Thīgwin, Shwelaung, Kyumpyatthat, and Kyaikpi.

The jail at Myaungmya has an enclosure capable of providing for 1,000 prisoners, but the actual accommodation in buildings is for 500, which is ample at present. The only occupations carried on by the prisoners are the manufacture of jail clothing for supply to other jails, and gardening.

The standard of education is fairly high. The percentage of males recorded as literate in 1901 was 42·8, and that of females 7·2, or 25·9 for both sexes together. In 1904 the District contained 7 secondary, 155 primary, and 256 private (elementary) schools, with 6,734 male and 1,366 female pupils. The total includes a considerable number of Karen seminaries. Myaungmya town possesses an Anglo-vernacular middle school, with an attendance of about 100, which is maintained by the municipality. The public expenditure on education in 1903–4 amounted to Rs. 26,600, of which the District cess fund provided Rs 18,000, Provincial funds Rs. 4,300, municipal funds Rs. 1,500, and fees Rs. 2,800.

The District contains two hospitals, with forty-nine beds. In 1903 the number of cases treated was 17,750, including 685 in-patients, and 419 operations were performed. The total expenditure was Rs. 8,000, of which municipal funds contributed Rs. 4,900 and Local funds Rs. 2,800.

In 1903–4 the number of persons successfully vaccinated was 12,642, representing 42 per 1,000 of population. Vaccination is compulsory only in Myaungmya and Wakema towns.

[W. E. Lowry, *Settlement Report* (1899); J. Mackenna, *Settlement Report* (1903); Major F. D. Maxwell, *Report on Inland and Sea Fisheries* (1904).]

Myaungmya Subdivision.—Western subdivision of Myaungmya District, Lower Burma, comprising the MYAUNGMYA and EINME townships.

Myaungmya Township.—Township of Myaungmya District, Lower Burma, lying between 15° 47′ and 16° 43′ N. and 94° 36′ and 95° 13′ E., with an area of 1,069 square miles. It is comprised between the Pyamalaw and Panmawadi rivers on the east and west, and extends from the Myaungmya river to the sea. It is for the most part flat, and would be a typical delta area were it not for a small tract of comparatively hilly country which rises to the south-west of the township head-quarters, forming the only high land in the District. The great

majority of the population occupy the north-east, and large stretches of jungle cover the southern portions. The population was 53,224 in 1891, and 75,343 in 1901, distributed in 227 villages and one town, MYAUNGMYA (population, 4,711), the head-quarters. About one-third of the total are Karens. In 1903–4 the area under cultivation was 205 square miles, paying Rs. 3,15,000 land revenue; and the total revenue amounted to Rs. 5,68,000.

Myaungmya Town.—Head-quarters of the District and township of the same name in the Irrawaddy Division of Lower Burma, situated in 16° 35′ N. and 95° E., on the Myaungmya river, close to the western border of the District. Myaungmya is a District of recent creation, and its head-quarters is one of the smallest in the Province. The population in 1901 was 4,711. Portions of the urban area are low-lying, but the civil station is not unpleasantly situated on fairly high ground behind the native houses which cluster round the river bank. There is little of note in the history of the town beyond what is embodied in the District article. It was the scene of the first rising among the Karens in 1853, and became the District head-quarters forty years later. It contains no pagodas or other remains of more than local importance. The municipality of Myaungmya was established in 1886. The municipal income during the ten years ending 1901 averaged Rs. 18,000. In 1903–4 the income was Rs. 26,000, principally derived from tolls on markets (Rs. 17,500) and house tax (Rs. 2,000). The expenditure amounted to Rs. 36,000, the chief items of outlay being conservancy (Rs. 5,000) and hospitals (Rs. 5,800). The only large municipal scheme worthy of mention is the construction of a market recently undertaken at a cost of Rs. 44,000. There are no industries of importance in the town. The municipal school is the most important in the District, with an attendance of about 100 scholars. The municipal hospital has thirty beds.

Myebon.—Coast township of Kyaukpyu District, Lower Burma, lying between 19° 38′ and 20° 16′ N. and 93° 13′ and 93° 51′ E., with an area of 441 square miles. The head-quarters are at the village of Myebon (population, 1,120), on an island at the northern end of Hunter's Bay, in the extreme north-west corner of the District. The township is hilly and intersected by tidal creeks. The population was 20,880 in 1891 and 24,100 in 1901. The number of villages is 146. The majority of the population are Buddhists, but there is a sprinkling of *nat*-worshipping Chins in its hill areas. The population is scattered and the density (54 persons per square mile) is low. About 58 square miles were cultivated in 1903–4, paying Rs. 61,000 land revenue.

Myede.—South-eastern subdivision of Thayetmyo District, Burma, conterminous with the Allanmyo township, and lying to the east of the Irrawaddy, between 18° 55′ and 19° 30′ N. and 95° 9′ and 95° 52′ E.

It has an area of 912 square miles, and the population was 76,563 in 1891 and 66,672 in 1901. The township contains one town, ALLANMYO (population, 10,207), the head-quarters; and 322 villages. The rainfall is precarious, and the large decrease in inhabitants since 1891 is due to emigration to the rich delta Districts of the Irrawaddy Division. About one-eighth of the population are Chins, inhabiting the slopes of the Pegu Yoma, which separates the township on the east from Toungoo District. The township, which is intersected by low hills, contained 85 square miles under cultivation in 1903-4, paying Rs. 63,000 land revenue.

Myelat Division (Southern Shan States).—A group of Shan States, Burma, bordering on the Meiktila Division of Upper Burma, and consisting of the States of HSAMÖNGHKAM, KYAWKKU, KYONG, LOI-AI, LOIMAW, MAW, MAWNANG, MAWSÖN, NAMHKAI, NAMTOK, PANGMI, PANGTARA, POILA, YENGAN, and LOILONG. They are in charge of an Assistant Superintendent stationed at Hsamönghkam (Thamakan), a village near the Thazi-Taunggyi road. The Assistant Superintendent also supervises the administration of the Shan State of YAWNGHWE.

Myher.—State in the Baghelkhand Agency, Central India. *See* MAIHAR.

Myingun.—South-western township of Magwe District, Upper Burma, lying along the Irrawaddy, between 19° 43′ and 20° 8′ N. and 95° 1′ and 95° 28′ E., with an area of 447 square miles. The soil consists mainly of *indaing*, a dry sandy earth on which sesamum and millets are the only crops. The population was 24,354 in 1891, and 26,029 in 1901, distributed in 101 villages, Myingun (population, 1,342), on the Irrawaddy south of Magwe, being the head-quarters. The area cultivated in 1903-4 was 101 square miles, and the land revenue and *thathameda* amounted to Rs. 69,000.

Myingyan District.—A dry zone District in the Meiktila Division of Upper Burma, lying between 20° 32′ and 21° 46′ N. and 94° 43′ and 96° 1′ E., with an area of 3,137 square miles. On the west it is bounded by the Irrawaddy river, on the north by Sagaing District, on the east by Kyaukse and Meiktila, and on the south by Magwe District. It is an irregularly shaped stretch of arid country, about twice as long as it is broad, stretching south-west and north-east along the eastern bank of the Irrawaddy. Most of it is dry undulating plain-land, diversified by isolated hill masses. The more northerly of these clumps of upland are comparatively insignificant. POPA HILL, however, near the south-east corner, is a conspicuous eminence, forming the most noticeable feature of the District. It is more or less conical in shape; its origin is volcanic, and it has two peaks of almost equal height nearly 5,000 feet above sea-level. While the summit is bare, the lower slopes

Physical aspects.

are covered with gardens, where fruit trees flourish, for owing to its position in the centre of the plains, Popa attracts and catches a liberal rainfall. On the south and east of the main central cone are many spurs extending to the Pin valley and Meiktila. North of the peak rough and hilly ground extends to the Taungtha hills, which rise from the plain a few miles south of Myingyan town, and attain a height of nearly 2,000 feet. Other stretches of upland deserving of mention are the Taywindaing ridge traversing the Pagan subdivision in the south-west, and the Yondo, the Sekkyadaung, and the Mingun hills in the Myingyan and Natogyi townships, in the extreme north of the District on the borders of Sagaing.

The only river of importance is the Irrawaddy, which skirts the western border. Entering the District near Sameikkon in the north, it runs in a south-westerly direction for a few miles, then south till it reaches Myingyan town, where it makes a curve to the west, forming, just off Myingyan, a large island called Sinde, which, in the dry season, interposes several miles of sandbank between the steamer channel and the town. After passing this bend, the river again takes a south-westerly course till it reaches Nyaungu (Pagan). Here the channel turns south for a while, then again south-west to Sale, and finally south-east till the southern border of the District is reached. In the channel are numerous fertile islands, on which tobacco, beans, rice, chillies, and miscellaneous crops are grown. Parts of these islands are washed away every year, and fresh islands spring up in their place, a source of endless disputes among the neighbouring *thugyis*. Besides the Irrawaddy, the only perennial streams are the Popa *chaung* in the south and the Hngetpyawaing *chaung* in the north. Only the first of these, however, has an appreciable economic value. The principal intermittent watercourses are the Sindewa, the Pyaungbya, and the Sunlun streams. For the greater part of the year the beds of these are dry sandy channels, but after a heavy fall of rain they are converted into raging torrents.

The rocks exposed belong entirely to the Tertiary system, and consist for the most part of soft sandstones of pliocene age thrown into long flat undulations or anticlines by lateral pressure. In some instances denudation has removed the pliocene strata from the crests of the more compressed folds, and exposed the miocene clays and sandstones beneath. These low ridges are separated by broad tracts covered with alluvium. The clay varies in consistency, but is generally light and always friable on the surface, however hard it may be below. The sandstone is of light yellow colour. It forms thick beds, which frequently contain nodular or kidney-shaped concretions of extremely hard siliceous sandstone. The concretions, which are sometimes of considerable size, are arranged in strings parallel to the bedding, and

project out of the surrounding softer materials, forming a very conspicuous feature in the landscape. In parts of the District, chiefly in the south, silicified trunks of trees are found, some of great length. Distinct from the rocks found in the plains is the volcanic Popa region. Dr. Blanford, in 1862, reported that he found six different beds represented on the hill and in its environs, which were as follows: lava of variable thickness capping the whole; soft sands and sandy clays, yellow, greenish, and micaceous; a white sandy bed, abounding in fragments of pumice; volcanic ash, containing quartz and pebbles; ferruginous gravel and sandy clay, containing quartz and pebbles and numerous concretions of peroxide of iron; coarse sand, mostly yellowish, with white specks.

The cutch-tree is found throughout the District, but it is fast disappearing. Not only is it cut and its very roots dug out of the ground to be boiled down for cutch, but the young trees are much exploited for harrow teeth. The *thitya* (*Shorea obtusa*), *tanaung* (*Acacia leucophloea*), *letpan* (*Bombax malabaricum*), *nyaung* (*Ficus*), and tamarind (*Tamarindus indica*) are the commonest trees. Toddy-palms (*Borassus flabellifer*) are very plentiful, and form an appreciable part of the wealth of the people. Bamboos are found on the low hills on the Meiktila border and on Popa. The jack-tree (*Artocarpus integrifolia*) is common about Popa, and the *zibyu* (*Cicea macrocarpa*) and the *zi* (*Zizyphus Jujuba*) produce fruit which is exported by the ton to Lower Burma, besides being consumed in the District itself. On Popa a little teak and a number of *thitya* and *ingyin* (*Pentacme siamensis*) trees are found.

Barely fifty years have elapsed since elephants, *sāmbar*, and tigers roamed the forests in the neighbourhood of Popa. Since the occupation of Upper Burma, however, no elephants have visited the District, and the *sāmbar* and tiger have disappeared, though there are still numerous leopards, and on Popa a few specimens of the serow (*Nemorhaedus sumatrensis*) have been seen and shot. The *thamin* (brow-antlered deer) is scarce, but hog and barking deer are common, the former in the heavier jungle, the latter everywhere. Wild dogs, which hunt in packs, are found in the Natogyi and Kyaukpadaung townships.

The climate of the District is dry and healthy, the atmosphere being practically free from moisture for the greater part of the year. In March and April, and often for several days together throughout the rains, a strong, high, dry, south-west wind sweeps the District, a trial to human beings and a curse to the crops. Popa, thanks to its elevation, has a pleasantly cool climate during the hot season, but has never been systematically made use of as a sanitarium. The maximum temperature in the Irrawaddy valley varied in 1901 from 105° in May to 85° in December, and the minimum from 75° in May to 56° in December.

In July, a typical rains month, the mean was about 80° in the same year.

Owing to its position in the dry zone, the District suffers from a fickle and scanty rainfall. An excessively heavy downpour is often followed by a lengthy spell of dry scorching heat; and it may be said that not much oftener than twice in the year on an average does the sky become black, and true monsoon conditions prevail. At other times the rainfall is confined to small showers and thunderstorms. It is, moreover, not only meagre, but capricious in its course, and leaves tracts here and there altogether unvisited. The rainfall in 1901, which was on the whole normal, varied from $22\frac{1}{2}$ inches at Pagan and Sale to 30 inches in the more hilly townships of Taungtha and Kyaukpadaung.

History.

The early history of the District is bound up with that of the famous Pagan dynasty, the beginnings of which are wrapped in a mist of nebulous tradition. According to legend, the kingdom of Pagan was founded early in the second century by Thamudarit, the nephew of a king of Prome, when that town was destroyed by the Talaings. This monarch is said to have established his capital at Pugama near Nyaungu, and to have been followed by kings who reigned at Pugama, Thiripyitsaya, Tampawadi, and Paukkārāma (or Pagan) for nearly 1,200 years. One of the most famous of these early rulers was Thinga Yaza, who threw off the yellow robe of the *pongyi* and seized the throne, and is credited with having left a mark in history by his establishment of the Burmese era, starting in A.D. 638. The whole history of this early period, however, is unreliable. Pagan itself is said to have been founded in 847 by a later king, Pyinbya; and here we have evidence from other sources, which more or less corroborates the date given. The Prome chronicles record a second destruction of Prome by the Talaings in 742, which led to the migration of the reigning house northwards to Pagan. Prome was in all probability raided several times in these early days, and even the later of the two sackings alluded to occurred at a period which can hardly be dignified with the title of historical. The early annals are of little scientific value, but from the accumulated mass of myth and tradition there emerge the two facts that the Pagan dynasty originated from Prome, and that it was finally established in the seats it was to make famous not later than the middle of the ninth century. The son and successor of Pyinbya, the founder of Pagan, was murdered by one of his grooms, a scion of the royal family, who succeeded him. One of the murdered king's wives, however, escaped and gave birth to a son, who eventually regained the throne and became the father of Anawrata. This great ruler conquered Thaton, and from the sack of the Talaing capital brought away the king Manuha and a host of

captive artificers, whom he employed in building the pagodas for which Pagan has been famous ever since. He died after a reign of forty-two years. His great-grandson, Alaungsithu, extended his sway over Arakan and reigned seventy-five years; he was succeeded by the cruel Narathu, who was assassinated by hired Indian bravoes, and was known afterwards as the *Kalākya min* ('the king overthrown by the foreigners'). While Narapadisithu, one of the last-named monarch's successors, was on the throne the kingdom attained the zenith of its glory, to crumble rapidly in the thirteenth century during the reign of Tayokpyemin, a monarch who earned his title by flying from Pagan before a Chinese invasion which he had brought on his country by the murder of an ambassador. The last king, Kyawzwa, was enticed to a monastery by the three sons of Theingabo, a powerful Shan Sawbwa, who compelled him to assume the yellow robe, and divided among themselves the residue of the Pagan kingdom. Since that time Pagan has played a comparatively unimportant part in Burmese history. Yandabo, where the treaty was signed in 1826 which put an end to the first Burmese War, lies on the Irrawaddy in the north of the District.

A District, with its head-quarters at Myingyan, was constituted in 1885 as the Mandalay expedition passed up the Irrawaddy, and Pagan was made the head-quarters of a second Deputy-Commissioner's charge. These two Districts contained, in addition to the areas now forming Myingyan, portions of Meiktila and Magwe, and the whole of what is now Pakokku District; but Pakokku and Meiktila were shortly afterwards formed, and on the creation of the former Pagan was incorporated in Myingyan. At annexation the local officials surrendered to the expedition, and there was no open hostility. The Burmese governor, however, after remaining loyal for six months, joined the Shwegyobyu pretender at Pakangyi in Pakokku District. During these early days of British dominion trade flourished on the river bank, but throughout 1886 portions of the District were practically held by dacoits, especially in the tract south of Pagan. The northern and eastern areas, however, were kept quiet to a certain extent by the establishment of posts at Sameikkon on the Irrawaddy, and at Natogyi inland in the north-east of the District; and combined operations from Myingyan and Ava put a stop to the depredations of a leader who called himself Thinga Yaza. But the mountain valleys about the base of Popa long remained the refuge of cattle-lifters, robbers, and receivers of stolen property, and at least one dacoit was still at large in this tract ten years after annexation. In 1887 a leader named Nga Cho gave considerable trouble in the south, and a second outlaw, Nga Tok, harried the north. The latter was killed in 1888; but the former and another leader, Yan Nyun, famous for his cruelties, disturbed the District for two years more. By 1889 the whole of Myingyan, excepting

the Popa tract, was free from dacoits; but it was not till 1890, when Yan Nyun surrendered, that the entire District could be regarded as pacified. Nga Cho remained at large six years longer, but ceased to be a dangerous leader when Yan Nyun came in.

The chief objects of archaeological interest are the ruined temples of PAGAN. In the Natogyi township, at Pyinzi, are the ruins of a moat and wall said to mark the site of the residence of a prosperous prince of olden days. In the Taungtha township, at Konpato, is the Pato pagoda, where a large festival is held every November. Near East Nyaungu is the Kyaukku, or rock-cave pagoda, said to have been built to commemorate the floating of a stone which a *pongyi*, charged with a breach of his monastic vows, flung into the river, establishing his innocence by means of the miracle. In the cliff under the pagoda are several caves inhabited by *pongyis*; and near them are the caves of the Hngetpyittaung *kyaung*, reputed to have been built for Buddhist missionaries from India, and to be connected by an underground passage with the Kyaukku pagoda, more than a mile distant. Festivals are held in November at the Zedigyi pagoda at Sale; in February at the Thegehla pagoda at Pakannge, in the Sale township; in November at the Myatshweku pagoda at Kyaukpadaung; and in July at the Shinbinsagyo pagoda at Uyin, in the Sale township.

Population.

The population was 351,465 in 1891, and 356,052 in 1901. Its distribution in the latter year is shown in the table below:—

Township.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Myingyan . . .	422	1	175	81,978	194	+ 15	20,418
Taungtha . . .	516	...	203	57,729	112	...	13,430
Natogyi . . .	395	...	160	57,338	145	+ 8	10,862
Pagan . . .	582	1	189	56,971	98	+ 15	13,178
Sale . . .	498	...	157	33,993	68	− 25	7,601
Kyaukpadaung . .	724	...	304	68,043	94	+ 2	13,853
District total	3,137	2	1,188	356,052	114	+ 1	79,342

The two towns are MYINGYAN, the head-quarters, and Nyaungu. The population has been almost stationary for several years past, and has increased materially only in the rather thinly inhabited township of Pagan. Elsewhere there has been a decrease, or the rise has been insignificant. Partial famines, due to scarcity of rain, have caused considerable emigration from the Sale township, and similar causes have operated elsewhere. A regular ebb and flow of population between the Districts of Meiktila, Yamethin, and Myingyan is regu-

lated largely by the barometer, but, owing to the absence of railways in Myingyan till lately, the inward flow in the more promising seasons has been checked. Though its rate of growth has been slow, Myingyan ranks high among the Districts of Upper Burma in density of population, and the rural population of the Myingyan township is as thick as in many of the delta areas. Buddhism is the prevailing religion; in fact, the adherents of other religions form less than 1 per cent. of the total, and all but a fraction of the inhabitants speak Burmese.

The number of Burmans in 1901 was 354,100, or more than 99 per cent. of the total population. The District is one of the few in Burma that has no non-Burman indigenous races; and the absence till recently of a railway is doubtless responsible for the smallness of the Indian colony, which numbers only about 1,400, equally divided between Hindus and Musalmāns. In 1901 the number of persons directly dependent on agriculture was 224,095, representing 63 per cent. of the total population, compared with 66, the corresponding percentage for the Province as a whole.

There are only 180 Christians, 109 of whom are natives, and there is at present comparatively little active missionary work.

Agriculture.

Myingyan is, for the most part, a stretch of rolling hills, sparsely covered with stunted vegetation, and cut up by deep nullahs; and most of the cultivation is found in the long and generally narrow valleys separating the ridges, and on the lower slopes of the rising ground. The cultivated areas occur in patches. Rich land is scarce, the rainfall is precarious, and one of the main characteristics of the country is the large extent of *ya* or 'dry upland' cultivation. The District may be divided for agricultural purposes into four tracts—alluvial, upland, valley, and the Popa hill area—while the crops grown on these may be split up into the following seven groups: permanently irrigated rice, *mayin* rice, *mogaung* rice, *ya* crops, *kaing* crops, *taze* crops, and gardens. Both *kaing* and *taze* crops are grown on inundated land in the river-side area. The 'dry crops,' which are of the ordinary kinds (millet, sesamum, and the like), are found away from the Irrawaddy. Some little distance from the river is a strip of poor land running north and south through the west of the Myingyan and Taungtha townships and the east of the Kyaukpadaung township, mainly devoted to the cultivation of millet, with sesamum and pulse as subordinate crops, often as separate harvests on one holding. South-west of this strip, and separated from it by the mass of Popa and the hills branching from it, is the poorest land in the District, occupying the greater part of the Pagan and Sale townships. The staple crop here is early sesamum, followed, as a second harvest, by peas, beans, or *lu*. The uplands occupying the northern portion of the Myingyan township, the western portion of

the Natogyi township, and the eastern portion of Taungtha township form, with the adjoining parts of Sagaing and Meiktila, the great cotton-growing tract of Burma, about 200 square miles in extent, nearly half of which lies within Myingyan. *Mogaung* (rain-irrigated) rice lands are cultivated in the east of the Natogyi township in the extreme north-east of the District, while *mayin* is grown in the beds of tanks, and the lower slopes of Popa are covered with plantain groves. The soil in the two richest townships (Natogyi and Myingyan) is loam and clay, and the rainfall is more regular here than in the poorest townships (Sale and Pagan), where gravel and sandstone predominate.

The following table gives the chief agricultural statistics for 1903-4, in square miles:—

Township.	Total area.	Cultivated.	Irrigated.	Forests.
Myingyan	422	183	1	468
Taungtha	516	172	...	
Natogyi	395	161	4	
Pagan	582	150	...	
Sale	498	113	...	
Kyaukpadaung	724	196	6	
Total	3,137	975	11	468

Nearly 140 square miles of the area cultivated in 1903-4 bore two harvests, and about 128 square miles failed to mature. In the same year millet covered about 420, and sesamum (chiefly the early variety) 336 square miles. Pulse of various kinds was grown on 137, and rice on only 81 square miles, an area quite insufficient for the needs of the District. Cotton covered 88 square miles, and 1,900 acres were under orchards, the greater part being plantain groves.

Repairs to the Kanna tank have added 4,000 acres to the rice lands in the Natogyi township, but elsewhere the cultivable area has slightly decreased of late, in consequence of the formation of 'reserved' forests. The only new crop that has met with success is the Pondicherry ground-nut, which was introduced a few years ago. In 1903-4 about 800 acres of land were under this crop. It gives a large outturn and is very remunerative. The experimental cultivation of Havana and Virginia tobacco has not met with success. The leaves of these varieties are looked upon as too small, and the Burmans decline to take the trouble to cure them after American methods.

Practically no advances have been made under the Land Improvement Loans Act. On the other hand, advances under the Agriculturists' Loans Act, for the purchase of seed-grain and plough cattle, are very popular. The advances, which averaged more than Rs. 25,000 in the three years ending 1904, are made on the mutual security of

the villagers requiring loans; their recovery on due date is easily effected, and no loss has been caused to the state by any failure in repayment.

The District has always been noted for its bullocks, whose quality is due to the large areas of pasturage that exist on lands not fertile enough for cultivation, or only occasionally cultivated. Cattle-breeding is practised by all the well-to-do cultivators to a greater or less extent. Goat-breeding has largely increased of late. Buffaloes are kept along the banks of the Irrawaddy, but are rare in the interior. A few sheep are reared in Myingyan town by butchers. Myingyan has always held a high place among the pony-breeding centres of Burma; and locally the palm is awarded to Popa by the Burmans, who credit Popa grass and water with special strength-giving properties, and have given the local breed the name of *kyauksaung-myo*. The necessity of allotting grazing-grounds has not yet arisen, for on the uplands there is abundance of waste land. Inland, away from the Irrawaddy, the question of watering the live-stock is often a difficult one.

Except in the basin of the Pin stream, which supplies a few private canals, there is practically no irrigation beyond what is afforded by tanks entirely dependent on the rainfall or high river-floods. The majority of these are in the north-east of the District, and the most important are the Kanna and the Pyogan. In 1901–2 the newly repaired Kanna tank began to water the fields below it, with the result that land, which used formerly to be cultivated but had dropped out of cultivation, is now being eagerly taken up. It is estimated to be capable of irrigating 4,000 acres. The dam was seriously breached in 1903, but has been repaired. The Pyogan tank irrigates about 1,000 acres. In the neighbourhood of Pyinzi, in the Natogyi township, a number of private tanks water a considerable area; but in the whole District only 6,800 acres were returned as irrigated in 1903–4. Of this area, 2,900 acres drew their supplies from Government works.

In 1901 the District contained 73 fisheries, of which 57 were in the Myingyan and 16 in the Pagan township. The only important one is the Daung, which lies about 5 miles to the south-west of Myingyan town, and dries up enough to produce *mayin* rice from November to April. A large number of the fishermen leave the District annually at the end of November for the delta Districts and Kathā, returning to Myingyan when the rains set in.

With the exception of a tract in the vicinity of Popa, the forests of Myingyan consist chiefly of dry scrub growth. Here the only plant of any importance is the *Acacia Catechu*, yielding the cutch of commerce. The cutch industry used to be flourishing, but has declined of late years owing to the exhaustion of the supply, due to

overwork in the past. Approaching Popa the scrub growth merges into dry forest with *ingyin*, and here and there *thitya* and teak of poor description, while the old crater of Popa and the slopes on the south and east sides of the hill are clothed with evergreen forest. At the close of 1900–1 there were no 'reserved' forests in the District, but since then 74 square miles have been gazetted as Reserves. The area of unreserved forests is 394 square miles; but hardly anything of value is left in any of the jungle tracts, and the total forest revenue averages only about Rs. 600.

Iron ore and sulphur have been found in the Pagan township, but are not worked. In several villages in the Kyaukpadaung township, and at Sadaung in the Natogyi township, salt is manufactured by primitive methods for local consumption. Petroleum oil has been found by the Burma Oil Company in the neighbourhood of Chauk village in the Singu circle of the Pagan township. The oil is said to be extraordinarily low-flashing, of a quality similar to that obtained from the Yenangyat wells. A refinery for extracting the naphtha has been built; and in 1903 the company was employing a staff of 7 Americans, 47 natives of India, and 55 Burmans. The Rangoon Oil Company is also boring within the limits of the District.

Trade and communications.

Cotton-weaving is practised by women on a small scale in nearly every village, the yarn used being generally imported from England or Bombay. A few goldsmiths, who make ornaments for native wear, are found in the towns and large villages; and at Myingyan the inhabitants of one whole street devote their time to casting bells, images, and gongs from brass. Pottery is made at Yandabo and Kadaw in the Myingyan township, and in a few other localities, but only as an occupation subsidiary to agriculture. Lacquer-ware is manufactured by the people of Old Pagan, West Nyaungu, and the adjoining villages. The framework of the articles manufactured is composed of thin slips of bamboos closely plaited together. This is rubbed with a mixture of cow-dung and paddy husk to fill up the interstices, after which a coat of thick black varnish (*thitsī*) is laid on the surface. An iron style is then used to grave the lines, dots, and circles which form the pattern on the outer portion of the box. Several successive coats of cinnabar, yellow orpiment, indigo, and Indian ink are next put on, the box or other article being turned on a primitive lathe so as to rub off the colour not required in the pattern. After each coat of colour has been applied, the article is polished by rubbing with oil and paddy husk. The workmen who apply the different colours are generally short-lived and liable to disease; their gums are always spongy and discoloured. Mats and baskets are woven in the villages on Popa and in the neighbourhood, where bamboos

grow plentifully. The principal factory is a cotton-ginning mill in Myingyan town owned by a Bombay firm. It is doing a large business, and buys up nearly three-fourths of the raw cotton grown in the District, having thus replaced the hand cotton-gins which existed in large numbers before its establishment. In addition to cotton-ginning, the mill extracts oil from cotton seed, and makes cotton-seed cake and country soap. Four other steam ginning factories have been established; and keen competition has caused the prices of the raw material to rule high, and has greatly benefited the cultivators.

The external trade is monopolized by Myingyan town, Sameikkon, Taungtha, and Yonzin in the Myingyan, and by Nyaungu, Singu, Sale, and Kyaukye in the Pagan subdivision. The principal traders at Myingyan are Chinese and Indians, but elsewhere the Burmans still have most of the local business in their hands. The chief exports are beans, gram, tobacco, cotton, jaggery, chillies, cutch, wild plums, lacquer-ware, hides, cattle, and ponies. Chief among the imports are rice, paddy, salt and salted fish, hardware, piece-goods, yarn, bamboos, timber, betel-nuts, and petroleum. The imports come in and the exports go out by railway and steamer. Most of the business is done at the main trade centres, but professional pedlars also scour the whole District, hawking imported goods of all sorts among the rural population.

The branch railway line from Thazi through Meiktila to Myingyan, commenced in 1897 as a famine relief work, has a length of about 32 miles within the District. The country is well provided with roads. Those maintained by the Public Works department have a length of 203 miles, the most important running from Myingyan to Mahlaing (31 miles), from Myingyan to Natogyi (19 miles), and on to Pyinzi near the Kyaukse boundary (15 miles), from Myingyan to Pagan (42 miles), from Pagan to Kyaukpadaung and Letpabya, near the borders of Magwe District (50 miles), and from Kyaukpadaung to Sattein and Taungtha (45 miles). About 400 miles of serviceable fair-weather roads, rather more than one-third of which are in the Pagan township, are maintained by the District fund.

The only navigable river is the Irrawaddy, which forms the western border. The Irrawaddy Flotilla Company's steamers (mail and cargo) call at Myingyan, Sameikkon, Nyaungu, Singu, and Sale regularly several times a week each way, and there are daily steamers from Myingyan to Mandalay and Pakokku. A large part of the trade of the riverain tract is carried in country boats. The District contains 19 public ferries—two managed by the Myingyan municipality, one by the Nyaungu town committee, and 16 by the Deputy-Commissioner for the benefit of the Myingyan District fund.

The earliest famine still remembered occurred in 1856–7, when the

rains are said to have failed completely and the crops withered in the fields. No steamers were available to bring up rice from Lower Burma, nor was there any railway to carry emigrants down; the result was that the people died in the fields gnawing the bark of trees, or on the highways wandering in search of food, or miserably in their own homes. The more desperate formed themselves into gangs, and murdered, robbed, and plundered. The Burmese government imported rice from the delta, but its price rose to, and remained at, famine level. From the epoch of this famine changes came upon the country. It had brought home to the cultivators the unreliability of rice; and the next few years saw an increase in the area under sesamum, cotton, and *bājra*, and the introduction of *jowār*. The years preceding the annexation in 1885 were bad, and in 1891–2 there was distress. In 1896–7 the early rain did not fall, and the early sesamum, the most important crop in the District, failed completely. No rain fell in either August or September, the November showers never came to fill the ear, and famine resulted. Relief works were opened without delay, and the total number of units (in terms of one day) relieved from November, 1896, to November, 1897, was four and a half millions. Remissions of *thathameda* owing to the famine amounted to nearly 4 lakhs. A total of $1\frac{1}{2}$ lakhs was expended out of the Indian Charitable Relief Fund on aid to the sufferers, and nearly 1 lakh was spent in granting agricultural loans in 1896–7 and 1897–8. The total cost of the famine operations exceeded 11 lakhs. The most important relief work carried out was the Meiktila-Myingyan railway.

Famine.

The District is divided for administrative purposes into two subdivisions: Myingyan, comprising the MYINGYAN, TAUNGTHA, and NATOGYI townships; and Pagan, comprising the PAGAN, SALE, and KYAUKPADAUNG townships. These are staffed by the usual executive officers, under whom are 777 village headmen, 436 of whom draw commission on revenue collections. At head-quarters are an *akunwun* (in subordinate charge of the revenue), a treasury officer, and a superintendent of land records, with a staff of 8 inspectors and 70 surveyors. The District forms a subdivision of the Meiktila Public Works division, and (with Meiktila and Kyaukse Districts) the Kyaukse subdivision of the Mandalay Forest division.

Administration.

The District, subdivisional, and township courts are as a rule presided over by the usual executive officers. An officer of the Provincial Civil Service is additional judge of the District court, spending half the month at Myingyan and half at Pakokku; and the treasury officer, Myingyan, has been appointed additional judge of the Myingyan township court. The prevailing form of crime in the District is cattle-theft. Litigation is, on the whole, of the ordinary type.

In king Mindon's time *thathameda* was introduced into the District, and in 1867 the rate is said to have been Rs. 3, while in the following year it rose to Rs. 5. The average seems to have fluctuated; but at the time of the British occupation it was nominally Rs. 10 per household, though the actual incidence was probably less than this. In addition to *thathameda*, royal land taxes were paid on islands, land known as *konayadaw*, and *mayin* fields. After annexation revenue was not as a rule assessed on *mayin* rice land, but was paid on the other two classes of royal land—in the case of island land at acre rates (from 1892 onwards); in the case of *konayadaw* at a rate representing the money value of one-fourth of the gross produce. The only unusual tenure found in the District was that under which the *kyedan* or communal lands in 47 circles in the Pagan and Kyaukpadaung townships were held. In former days the people had the right to hold, but not to alienate, these lands, and any person who left the circle forfeited the right to his holding. No rents were paid to the crown for the land, but military service had to be performed if required. The District was brought under summary settlement during the seasons 1899–1901, and in 1901–2 the former land revenue system was superseded by the arrangement now in force. Under this, the rates on non-state rice land vary from 15 annas per acre on *mogaung* to Rs. 3 on irrigated rice; on state lands the rate is a third as much again. On *ya* land the minimum is 4 annas and the maximum Rs. 1–4 per acre, and non-state land is assessed at the same rate as state land. The assessment on orchards varies from Rs. 1–14 on non-state plantain groves in the plains to Rs. 20 on state betel vineyards. Plantains on Popa pay Rs. 3 or Rs. 4 per acre, according as they are on non-state or state land; and all other garden crops (mangoes, jacks, toddy-palms, &c.) pay Rs. 3, whatever the nature of the land. On riverain *bobabaing* land (*kaing* or *taze*) rates vary from Rs. 1–8 for the least valuable crops to Rs. 5–4 for onions and sweet potatoes, the state land rates being one-third higher. If an area is twice cropped, only the more valuable crop is assessed. The *thathameda* rate per household was reduced from Rs. 10 to Rs. 3 in 1901.

The growth of the revenue since 1890–1 is shown in the following table, in thousands of rupees:—

	1890–1.	1900–1.	1903–4.
Land revenue . .	13	45	4,45
Total revenue . .	5,92	7,77	9,21

Until the introduction of settlement rates, *thathameda* was by far the most important source of revenue in the District. It fell from Rs. 6,40,000 in 1900–1 to Rs. 2,23,000 in 1903–4.

The income of the District fund in 1903–4 was Rs. 17,200, which is devoted mainly to public works. There is one municipality, MYINGYAN. Pagan was formerly a municipality, but in 1903 a body known as the Nyaungu town committee took the place of the municipal committee.

The District Superintendent of police has under him 2 Assistant Superintendents (in charge of the Myingyan and Pagan subdivisions), 2 inspectors, 13 head constables, 38 sergeants, and 397 constables, distributed in 11 stations and 15 outposts. The military police belong to the Mandalay battalion, and their sanctioned strength is 205 of all ranks, of whom 145 are stationed at Myingyan, 30 at Nyaungu, and 30 at Kyaukpadaung.

A Central jail is maintained at Myingyan, and a District jail, mainly for leper prisoners, at Pagan. The Myingyan jail has accommodation for 1,322 prisoners, who do wheat-grinding, carpentry, blacksmith's work, cane-work, and weaving and gardening. The Pagan jail contains about 60 convicts, half of them lepers. In the leper section only the lightest of industries are carried on; in the non-leper section the usual jail labour is enforced.

Owing, no doubt, to its large proportion of Burmans, Myingyan showed in 1901 a fair percentage of literate persons—45 in the case of males, 2·4 in that of females, and 22 for both sexes together. In 1904, 5 special, 14 secondary, 111 primary, and 1,145 elementary (private) schools were maintained, with an attendance of 17,724 pupils (including 1,037 girls). The total has been rising steadily, having been 7,539 in 1891 and 15,121 in 1901. The expenditure on education in 1903–4 was Rs. 15,300, of which Provincial funds provided Rs. 12,100, while Rs. 3,100 was contributed by fees.

There are three hospitals with a total of 63 beds, and two dispensaries. In 1903 the number of cases treated was 23,272, including 702 in-patients, and 626 operations were performed. The joint income of the institutions amounted to Rs. 12,100, towards which municipal and town funds contributed Rs. 6,800; Provincial funds, Rs. 3,800; the District fund, Rs. 600; and private subscribers, Rs. 800.

Vaccination is compulsory in the towns of Myingyan and Nyaungu. In 1903–4 the number of persons successfully vaccinated was 10,776, representing 30 per 1,000 of population.

[B. S. Carey, *Settlement Report* (1901).]

Myingyan Subdivision.—Northern subdivision of Myingyan District, Upper Burma, containing the townships of MYINGYAN, TAUNGTHA, and NATOGYI.

Myingyan Township.—River-side township in the extreme north of Myingyan District, Upper Burma, lying between 21° 21′ and 21° 46′ N. and 95° 16′ and 95° 40′ E., with an area of 422 square miles.

The greater part is flat and cultivated with *jowār* and pulse, and in the north with cotton. Rice is grown near the Irrawaddy. The population was 78,926 in 1891, and 81,978 in 1901, distributed in one town, MYINGYAN (population, 16,139), the head-quarters of the township and District, and 175 villages. In 1903-4 the area cultivated was 183 square miles, and the land revenue and *thathameda* amounted to Rs. 1,93,000.

Myingyan Town.—Head-quarters of the District of the same name in Upper Burma, situated in 21° 30′ N. and 95° 23′ E., on the left bank of the Irrawaddy, about 80 miles below Mandalay. The town, which comprises six wards, and has an area of 3½ square miles, stretches for some distance along the bank of the river, but does not extend far inland. It is surrounded by dry, undulating country and partakes of the nature of its environs, containing comparatively little in the way of natural tree vegetation, though steps are now being taken to remedy this defect. It is laid out with several metalled roads, one of the most important of which is the Meiktila road passing through the centre of the town. The public buildings include a jail, a courthouse, a hospital, and two bazars. The population of Myingyan fell from 19,790 in 1891 to 16,139 in 1901—a diminution due to the removal of the troops as well as to other causes. Its Indian community is small for a large trading town, numbering only 833.

The chief local manufactures are cart-wheels and castings for brass images, bells, and gongs; and it contains a large cotton-ginning mill belonging to a Gujarāti firm. The greater part of the inhabitants are engaged in trade. Before the opening of the Toungoo-Mandalay railway Myingyan was one of the largest towns on the Irrawaddy, doing a large business with Meiktila and Yamethin Districts and with the Southern Shan States; but since the extension of the main line of railway and the departure of troops from the station it has lost much of its importance. The Thazi-Meiktila-Myingyan branch, which now connects it with the main line, was commenced in 1897 as a famine relief work and completed in 1899; and it is hoped that its construction will benefit the town. In the rains the Irrawaddy mail-steamers running between Mandalay and Rangoon call twice weekly at Myingyan. During the dry season the shifting of the channel makes it necessary for the boats to anchor some 3 miles from the town, at Sinde. The railway should remove much of the inconvenience and dislocation of commerce caused by the stream's vagaries. Daily steam ferries ply between Myingyan and Pakokku on the one hand, and Myingyan and Mandalay on the other. The town was constituted a municipality in 1887. During the ten years ending 1901 the municipal income and expenditure averaged between Rs. 35,000 and Rs. 38,000. In 1903-4 the receipts amounted to Rs. 39,000, the main sources of revenue

being bazar rents (Rs. 22,000) and house and land tax (Rs. 5,400). The expenditure in the same year amounted to Rs. 41,000, made up for the most part of Rs. 9,000 spent on the hospital, Rs. 7,400 on conservancy, and Rs. 4,600 on lighting. The water-supply is drawn partly from the river and partly from a deep well sunk by the municipality. A scheme to cost $2\frac{3}{4}$ lakhs, for damming the Sunlun *chaung* some 4 miles south-east of Myingyan, so as to form a reservoir for water-supply, has been sanctioned by Government, and is on the list of famine relief works. The town contains a hospital and a dispensary. The American Baptist Mission and the Buddhist community maintain Anglo-vernacular schools, with a total attendance of about 150 pupils.

Myinmu Subdivision.—Subdivision of Sagaing District, Upper Burma, containing the MYINMU, CHAUNGU, MYAUNG, and NGAZUN townships.

Myinmu Township. — Township in Sagaing District, Upper Burma, lying along the northern bank of the Irrawaddy, between 21° 49′ and 22° 10′ N. and 25° 21′ and 94° 41′ E., with an area of 286 square miles. It contains no high ground, and away from the Irrawaddy and Mu the country is very dry. The population was 39,386 in 1891, and 41,256 in 1901, distributed in 86 villages, the head-quarters being at Myinmu (population, 3,368), on the river bank close to the Sagaing-Alon railway, 30 miles west of Sagaing town. The township contains a number of large villages: two (besides Myinmu) with a population exceeding 2,000, Allagappa (3,795) and Wunbye (2,049), and six with a population of between 1,000 and 2,000. Along the Irrawaddy are several swamps which are used for irrigation, and are themselves cultivated as they dry up. The area cultivated in 1903-4 was 120 square miles, and the land revenue and *thathameda* amounted to Rs. 1,09,000.

Myitkyinā District.—District in the Mandalay Division of Upper Burma, the northernmost of the Province, lying between 24° 37′ and 27° 20′ N. and 96° 0′ and 98° 20′ E., with an area of 10,640 square miles. Only the lower portion of the District is 'administered'; over the upper portion, a tract of unexplored country about the head-waters of the Chindwin and Irrawaddy, comprising the Hukawng valley, HKAMTI LONG, and what is known as the Sana tract, no direct administrative control is at present exercised. The 'administered' area is bounded on the north-east by the Kumpi range of hills, which forms the northern watershed of the Shingaw valley; on the north by the N'maikha down to the confluence where that stream joins with the Malikha to form the Irrawaddy, and thence by a geographical line running east and west at 25° 45′ N. On the north-west it is bounded by the Hukawng valley; on the west it is separated from the Upper Chindwin District by a geographical line running north and south at

96° E., and by the Namsang stream; and on the south its borders march with Kathā and Bhamo Districts. The eastern boundary abuts on Yünnan. At its northern extremity, the dividing line between the District and China is formed by the watershed between the drainage of the Irrawaddy on the one hand and of the Shweli and Taping on the other; farther south it follows the course of two streams, the Tabak flowing south and the Paknoi flowing north, which unite to form the Nantabet, an eastern tributary of the Irrawaddy, while about 5 miles south of Simā in the south-east of the District the border-line again takes the watershed between the Irrawaddy and the Taping, till Bhamo District is reached.

Physical aspects.

With the exception of the actual basins of its main streams, Myitkyinā is mountainous throughout. The eastern Kachin Hills run down southwards from Tibet, and extend along the whole eastern border of the District, their breadth from the foot to the crest (the Chinese boundary) being 30 to 35 miles, and their heights varying from 3,000 to 7,000 feet, but rising in places to peaks as high as 11,000 feet. On the western side of the broad Irrawaddy plain is the Kumon range, which stretches from the Hkamti country east of Assam southwards to the latitude of Kamaing (25° 30′ N.), terminating near Mogaung in the Shwedaunggyi peak (5,750 feet). On its northern slopes the Chindwin, locally known as the Tanai, is supposed to have its source. South of Mogaung and the end of the Kumon range, from which they are separated by the valley of the Mogaung river, start the Kaukkwe Hills, in about 25° 10′ N. They run southwards in two diverging lines; through the eastern branch, which skirts the Irrawaddy, that river forces its way and forms the third or upper defile; the western spur separates the Kaukkwe valley from the Nanyin valley, which the Sagaing-Myitkyinā railway follows, and is continued into Kathā District. Other ranges deserving of mention are the Loipyet, which separates the Nanyin and Indaw streams, starting at Kamaing; and the hilly country which includes the Jade Mines tract, dividing the Uyu valley from the valleys of the Upper Mogaung and the Indaw. All this mass of upland is thickly clothed with jungle, and the scenery is in places magnificent.

Nearly the whole of the District lies within the basin of the Irrawaddy; but while on the east the country rises, with but a small break here and there, from the river to the hills on the Chinese frontier, and is drained by short direct tributaries, that part of the District lying on the west of the Irrawaddy, nearly three-quarters of the whole, drains by numerous streams into one large tributary, the Mogaung river, and is characterized by several valleys possessing great possibilities of cultivation. The Irrawaddy, formed by the confluence of the Malikha and

N'maikha streams in 25° 45′ N., flows in a southerly course across the District, somewhat nearer to its eastern than its western border. Above Sinbo in the south of the District the country on either side is a luxuriant plain, but at Sinbo the river enters the third or upper defile. The scenery here is wild and picturesque; the river in the rains becomes a foaming mass of dull white: in one place, known as the 'Gates,' the stream is pent up in a rocky channel, only 50 yards wide, formed by two projecting rocks below which are two huge whirlpools. In flood-time this obstruction stops navigation of any kind, and launches can negotiate it only in the dry season. The Irrawaddy's most important tributary in the District is the Mogaung river (or Nam Kawng), which rises beyond the 'administrative' border in the north, and flows past Kamaing and Mogaung in a general south-easterly direction, entering the main river about 15 miles north of Sinbo. At Kamaing it is joined by the Indaw, which runs a north-easterly course from the Indawgyi Lake; and at Mogaung by the Nanyin (or Nam Yang), which comes with the railway from Kathā District also in a north-easterly direction. The only tributary of any importance on the left bank of the Irrawaddy is the Nantabet, which rises on the Chinese border and flows due west into the main river about half-way between Myitkyinā and Sinbo.

The INDAWGYI LAKE, the largest in Burma, lies between 25° 5′ and 25° 20′ N. and 96° 18′ and 96° 23′ E., near the south-west corner of the District, and has an area of nearly 80 square miles. It is surrounded on three sides by ranges of hills, but has an outlet, the Indaw river, on the north. The lake abounds in fish and the valley is fertile; but it is only beginning to recover from the devastation caused by the Kachin rising in 1883.

The hill ranges consist of metamorphic and crystalline rocks, on which eocene and miocene trap have been deposited. Limestone, sandstone, clays, and ferruginous conglomerates are met with. The soil in the plains near the Irrawaddy is alluvial clay and loam, and is very fertile. The jade, amber, and other mines found in the older formations are referred to below.

The vegetation is luxuriant, but, except for forest purposes, has not been exhaustively studied. Covering a considerable range of altitude, it must of necessity be varied. Much of the plain land consists of stretches of elephant-grass, and bamboos are very abundant.

The District possesses a varied and numerous fauna, including the elephant, rhinoceros, tiger, leopard, bear (Tibetan and Malayan), bison (*Bos gaurus*), *tsine* or *hsaing* (*Bos sondaicus*), *sāmbar*, hog deer, barking-deer, serow (called by Burmans the jungle goat), wild hog, wild dog, jungle cat, monkeys (including the gibbon), and the porcupine.

The climate of Myitkyinā from December to March is pleasant. It is very cold at times, but along the Irrawaddy and other valleys the mornings at this season are spoilt by heavy fogs, which do not lift till 9 or 10 o'clock. The rains are heavy, and from June to October the climate cannot be said to be healthy, malarial fever being prevalent even in the town. The mean maximum temperature from November to the end of February is about 73°, and the mean minimum temperature during the same period about 56°, the averages for the rest of the year being about 88° and 71° respectively. No official register of temperature is kept. The annual rainfall of the last eight years, as registered at Myitkyinā, averaged 75 inches, and at Mogaung 80 inches.

History.

The part of the District lying west of the Irrawaddy and the plain on the east of the river once formed the old Shan principality of Möngkawng (Mogaung). In Ney Elias's *History of the Shans* we are informed that this region was in early ages inhabited by a people called Nora, who were considerably more civilized than their neighbours, and had a reputation as a learned class. Of these people Francis Buchanan Hamilton states that they called themselves Tai Long (or Great Shans) and spoke a dialect little different from that of Siam; and it is a fact that at the present day the Siamese understand the vernacular spoken in this neighbourhood better than the more adjacent Tai dialects of the Southern Shan States. The first Sawbwa of Möngkawng, according to the chronicle, was Sam Long Hpa (1215), who made extensive conquests in all directions, and ruled over territory stretching from Hkamti Long to Shwebo, and extending into the country of the Nāgās and Mishmis. Until 1557 the principality was more or less under Chinese influence; but in that year it was invaded by an expedition from Pegu, and thereafter was subject to Burma or independent, according to the strength of the reigning monarch, till it was finally subjugated in 1796 and governed by *wuns* sent from the court of Ava. The Shans broke out into rebellion early in the nineteenth century; and the important walled village of Waingmaw, just below Myitkyinā on the left bank of the Irrawaddy, was destroyed by a Burmese expedition from Bhamo in 1810. The final blow to the dependency came from the Kachins, who began to press down from the north about fifty or sixty years ago. The Shans gradually became exhausted, and in 1883 a rebellion fostered by a man named Haw Saing, who professed to be the re-incarnation of a legendary Shan prince, established Kachin predominance. This rising started with the devastation of the Indawgyi valley, and culminated in the capture of Mogaung. The rebels were dispersed; but, as in Bhamo District, the Burmese government was incapable of protecting its Shan

subjects, who continued for several years to pay tribute to the local Kachin chiefs (*duwas*) in return for freedom from molestation, the amount varying from several buffaloes to a handful of salt. This was the state of Myitkyinā when it passed into the hands of the British as a portion of Bhamo District. In February, 1886, the Deputy-Commissioner of Bhamo received the submission of the local officials at Mogaung; but great difficulties were met with in the administration of the country. The first *myo-ok* was assassinated only two months after his arrival; the Burman officer appointed in his place declined to stay at Mogaung unless supported by troops; and his successor, one Po Saw by name, fled rather than meet the expedition sent up there in 1887, and thereafter became openly rebellious. He instigated the Lepai Kachins to oppose the column from Bhamo that had come to appoint his successor, and attacked Mogaung, but without success. In 1887 Mogaung was strongly stockaded, and made the head-quarters of the Mogaung subdivision of Bhamo District. Po Saw made another attack on it in 1888, and caused some loss to the garrison. In 1888-9 four punitive expeditions were dispatched under the direction of Sir George White against the surrounding Kachin tribes, which accomplished their end with little loss, a post being established at Kamaing on the Mogaung river. In 1891 the Myitkyinā subdivision was formed. In 1890-1 four columns were dispatched to bring the Kachins west of the river under direct control, one of which visited the Hukawng valley and the amber and jade mines, and met a column from Assam. Two of the expeditions sent to subdue the Kachins east of the Irrawaddy in 1891-2 encountered very considerable difficulties. One column captured the hill village of Sadon in the north-east of the District, and went on to explore the banks of the N'maikha; in its absence the post at Sadon was besieged by the Kachins, and had to be relieved by a column which had been operating in the neighbourhood of Simā, south-east of Myitkyinā town. In 1892-3 a military police column concentrated at Talawgyi, a village due south of Myitkyinā on the eastern bank of the Irrawaddy, and after some opposition established a post at Simā. On the very day Simā was reached Myitkyinā was suddenly raided by the Sana Kachins, a tribe living beyond the 'administrative' limit. The subdivisional officer's courthouse was burnt, and the *sūbahdār*-major of the Mogaung levy was shot dead. Meanwhile the Kachins had enveloped Simā; and Captain Morton, the commander of the expedition, was mortally wounded while withdrawing a picket, and was with difficulty conveyed inside the fort by Surgeon-Major Lloyd, who afterwards received the Victoria Cross for his gallantry. Military police were then dispatched from Myitkyinā, and a column which had been working south of the Taping was

sent up northwards to create a diversion; but it was not until 1,200 rifles had been called up and considerable fighting (involving the death of several European officers) had occurred, that the Kachins were finally scattered at Palap, south of Simā. After the formation of Myitkyinā District in 1895 an expedition was sent to punish the Sana Kachins for their raid on Myitkyinā, and twenty-four villages were heavily fined. The last fighting was in 1899–1900, when an expedition sent to explore the country east of the N'maikha was cut off by a force of Chinese, who lost 70 killed and many wounded before they gave way.

Population.

Nearly one-third of the population inhabiting the Kachin Hills in the east were only 'estimated' in 1901, owing to the impossibility of obtaining reliable supervision in that remote and backward area. The population of the District was returned as 51,021 in 1891 and 67,399 in 1901. Its distribution in the latter year is shown in the following table:—

Township.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Number of persons able to read and write.
Mogaung	3,490	...	226	18,867	5	2,738
Kamaing	2,650	...	126	9,687	4	1,904
Myitkyinā	4,500	1	582	38,845*	9	3,367
District total	10,640	1	934	67,399	6	8,009

* Made up of 17,560 in the regularly enumerated and 21,285 in the 'estimated' areas.

Though the enumeration of 1901 was admittedly partial, it seems clear that a substantial increase in the population had taken place during the previous decade. There is a certain amount of immigration from China (including both Chinamen and Shan-Chinese), and to a smaller extent from the Shan States also. Rather more Buddhists than Animists were enumerated in the areas regularly dealt with in 1901, but in the District as a whole Animists are in the majority. Kachin is the principal language, and Shan is more spoken than Burmese.

The most numerous indigenous race is that of the KACHINS, who form rather more than half the total population. They inhabit the hills on both sides of the Irrawaddy over all the northern and north-eastern parts of the District. The Lisaws, Szis, Lashis, and Marus are practically all residents of the 'estimated' areas, and their numbers are not precisely known. Shans numbered 17,300 in 1901, including Shan-Chinese, who possess about a dozen villages. They are found for the

most part in the Myitkyinā plain. The Burmans numbered only 6,600, living in the river valley, mostly in Shan villages. The total of Chinamen was 3,600, most of them traders in and near Mogaung and Myitkyinā town. A tribe peculiar to the District is the Hpons, who inhabit the third defile and a few villages north of it in the Mankin valley, and are indispensable to the keeping open of the river during the rains. They resemble the ordinary Shan-Burmans in dress and features, and appear to have been returned as such in 1901; but they have their own dialect, now dying out, and worship only the one great *nat* of the hills. Natives of India numbered about 5,000 in 1901, nearly four-fifths of whom were Hindus. The great part of this alien population is composed of military police and other Government and railway employés. There are, however, a certain number of Indian traders in Myitkyinā town. Assuming that practically all the inhabitants of the 'estimated' areas were cultivators, about 52,700 people were dependent directly on agriculture in 1901, or 78 per cent. of the total population. Of these, more than 30,000 were probably supported by *taungya* (shifting) cultivation alone.

The last enumeration showed a total of 161 Christians in the District, of whom 116 were natives. The American Baptist Mission has a representative at Myitkyinā and has opened a Kachin boys' school.

Agriculture.

With respect to agriculture, the District may be divided into two portions: the level valley lands on the banks of the Irrawaddy and its tributaries, and the hills. In both regions the staple crop is rice, but there is a difference in the method in which it is grown. The best rice lands are those in the valley of the Nanyin, and, generally speaking, the soil in the river basins is extremely fertile, and, the rainfall being sufficient, rice is very easily grown; indeed the ground will produce almost anything, as has been proved by the natives of India who live at Myitkyinā. Rice is grown in the plains in the usual manner, that is, in embanked fields. Another less common method of cultivation, which is also practised in the lowlands, consists in cutting down the jungle, firing it, ploughing the ashes into the soil, and then sowing the seed broadcast. Fields cultivated in this manner are known as *lebok*. A plot of land thus dealt with cannot be worked for more than two years, after which it lies fallow for some six or seven. *Taungya* is practised in the hills. In the case of cultivation of this kind, a hill-side is selected, the jungle on it is cut and burnt, and when the rains have begun the rice seed is dibbled into the ground, the crop being reaped in the cold season. It is a method confined to the hills, as its name signifies. *Taungya* land is cropped only twice as a rule, and is left fallow for 9 or 10 years subsequently.

The following table exhibits, in square miles, the chief agricultural statistics of the District for 1903–4. The area cultivated excludes *taungya* cultivation, which is the most prevalent form.

Township.	Total area.	Cultivated.	Irrigated.	Forests.
Mogaung .	3,490	6	0·5	6,130
Kamaing .	2,650	1	...	
Myitkyinā .	4,500	16	4·5	
Total	10,640	23	5	6,130

Rice covers the greater part of the cultivated area. A little tobacco is grown on the alluvium close to the river banks, and potatoes and gram have been tried successfully by natives of India at Myitkyinā. On the hills, in addition to rice, crops of cotton, sesamum, and millet are produced, as well as opium for local consumption, and a little tea is grown in some of the hill villages on the west bank of the Irrawaddy.

The area under cultivation is steadily increasing, but, as the District has not yet been cadastrally surveyed, estimates made of the expansion are of little value. The growth is most noticeable in the Nanyin valley, near the railway line, and in the region round the Indawgyi Lake. Of new products, Havana tobacco and Mocha coffee have been introduced into the District. The former has proved successful, but it is still too soon to pass any opinion on the prospects of the latter. Peach-trees thrive in the Government experimental garden at Myitkyinā, and yearly produce good crops; but apples, plums, pears, and nectarines, all of which are being tried, have as yet yielded no results. A few years ago the agriculturists showed no disposition to take loans from Government, but this feeling has died out, and there is now no prejudice against this form of assistance. The loans made by the state are devoted for the most part to the purchase of plough cattle, and are recovered with little or no trouble. The amount advanced during the seven years ending 1905 averaged about Rs. 6,000 annually.

There is no peculiarity about the local breeds of cattle. The beast most in favour for agricultural purposes is the buffalo. Large numbers of cows are, however, bred for milch purposes by natives of India living at Myitkyinā, Mogaung, Kamaing, Waingmaw, and Hopin. Practically no ponies and only a few goats are kept, but sheep are imported during the dry season from China. A large number of mules are brought in from China in the open season for hire as transport animals, but there is no mule-breeding within the District. No grazing grounds have been regularly defined. Fortunately, however, owing to the heavy rainfall and the scant dimensions of the cultivation, lack of fodder is unknown.

Very little land is irrigated in the District, the small weirs at Sinbo,

Katcho, Waingmaw, Hopin, and other villages each supplying only a few acres. The total area returned as under irrigation in 1903-4 was 5 square miles, nearly all of which consists of rice lands in the Irrawaddy valley. The weir on the Nanlon stream near Waingmaw was built by Government in 1899 at a cost of Rs. 11,000. The Indawgyi Lake abounds with fish, but no other fisheries are of any importance.

Forests.

Myitkyinā possesses both hill and plain forests. The forests of the plains are much mixed with elephant-grass, and in the drier portions the characteristic trees are *Dipterocarpus tuberculatus* and species of *Shorea*, *Butea*, &c., while by far the commonest tree in the moister portions is the silk-cotton tree (*Bombax malabaricum*). The northern limit of teak is here reached, and very few trees are found north of Myitkyinā town. A consequence of this is that where teak occurs it does not ascend the hills to any considerable height, but is found chiefly just along their bases. The finest teak areas are near the Indawgyi Lake. Though a considerable quantity of india-rubber (*Ficus elastica*) nominally comes from Myitkyinā, it is in reality all collected beyond the 'administrative' border and imported. The area under 'reserved' forests is 130 square miles, and the forest receipts in 1903-4 were $1\frac{3}{4}$ lakhs. With the exception of india-rubber, the trade in which has shrunk to very small proportions within the last two years, there are no minor forest products of importance.

Minerals.

The principal minerals are jade, mined in the north-west of the District; gold, found in the Irrawaddy; rubies, extracted at Nanyaseik, 13 miles above Kamaing on the Nanya stream; and corundum at Manwe, on the Indaw stream. Beyond the 'administrative' border there are amber-mines.

Jade is worked in quarries near Tawmaw and Hweka, close to the Upper Chindwin District, and in river-mines at Mamon on the Uyu *chaung*. The quarries at Tawmaw have produced immense quantities of the stone, but it does not approach in quality that obtained in boulders in the river banks or at the bottom of the stream. For the Burmese and Chinese market valuable jade has to satisfy rigid conditions of colour, transparency, brilliancy, and hardness. The Tawmaw stone, which is of a particular shade of dark green, satisfies the first condition, but fails in regard to the other three. The method of working the quarries is primitive. The first fracture being brought about by the application of artificial heat followed by cold at night, crowbars are driven in and large blocks are obtained, which are broken up into a shape and size suitable for transport, either on mules to Kamaing or on bamboo rafts down the Uyu to Kindat. An *ad valorem* duty of $33\frac{1}{3}$ per cent. on the output is collected at Mogaung

and Kindat. This duty averaged Rs. 50,000 during the last three years, the out-turn of jade in 1903 being 1,340 cwt., valued at Rs. 1,22,000.

The ruby tract at Nanyaseik is worked after a primitive fashion by Government licensees. The miners dig in shallow pits scattered over a wide area, as the ruby-bearing soil (*byon*) occurs in pockets. The revenue from this source fluctuates very considerably, depressions following prosperous periods from time to time. It reached Rs. 33,000 in 1895–6, but dropped to Rs. 80 in 1902–3. The tract is now practically deserted.

The amber-mines are situated beyond the 'administrative' frontier in the Hukawng valley near the village of Maingkwan. The shafts dug for its extraction are only wide enough for a man to descend and ascend by steps, and are seldom more than 40 feet in depth. As with jade, amber is found in pockets, and a cluster of pits always shows the existence of such a pocket. The product, unlike jade, is bought only by the Burmans, and is by them used for the manufacture of trinkets and beads. The corundum mines at Manwe are worked in a similar manner, but are of little value. Gold-washing is fitfully carried on in the Irrawaddy by Shans, Chinese, and Burmans. A steam dredger has been at work since 1902 above Myitkyinā dredging for gold, and the venture shows promise of success.

Trade and communications.

There are no arts or manufactures worthy of mention. The Kachin women weave a strong cloth, and every Kachin makes his own rice-liquor (*cheroo*); but both weaving and brewing are on a very small scale, and neither the cloth nor the liquor is intended for other than home consumption.

The import trade is entirely in the hands of natives of India and Chinese, the articles imported by railway from Lower Burma and Mandalay being salt, piece-goods, hardware, yarn, crockery, and matches for the Myitkyinā and Mogaung bazars, which are the two principal distributing centres for those commodities. From Yünnan the Chinese bring in fruit, poultry, sheep, and manufactured articles, which for the most part take the form of pots and pans, umbrellas, rugs, and clothing. The exports are jade, amber, and india-rubber from the Hukawng valley, and teak-wood. The jade goes mostly to China and the other articles to Lower Burma. The traffic in jade and rubber is chiefly in the hands of Chinese, who visit the jade-mines yearly in large numbers; the timber trade is managed by an English firm. The total value of the imports from Western China in 1903–4, over what are known as the Waingmaw and Kazu routes, was about 1¼ lakhs, the corresponding figure for exports being about a lakh. Between the Kachins in the hills and the Shans in the plains there is some traffic in liquor, opium, salt, and sesamum; but the instincts

of the Kachins are not commercial, and at present there seems little prospect of an expansion of trade in this direction. Maingna and Waingmaw, east of the Irrawaddy, and Myitkyinā, Mogaung, and Kamaing, west of the Irrawaddy, are the chief emporia of what Kachin trade there is. Owing to difficulty of transport, trade with China is not likely to increase in the immediate future.

Of communications the most noteworthy is the railway, which runs diagonally across the greater part of the centre of the District from the south-west, and, passing through Mogaung, has its terminus at Myitkyinā. Next to the railway in importance comes the Irrawaddy, which is navigable all the year round by boats and small steamers between Watugyi and Simbo. Other waterways are, however, useful. The Mogaung stream can be used at all seasons by boats as far north as Laban, and during the rains by launches up to Kamaing; the Indaw Lake and *chaung* are both navigable throughout the year by country boats; and small country craft can ply on the Nantabet at all times of the year as far as Kazu.

The principal land communications are: the road from Waingmaw to Sadon and thence to China by two alternative routes, the first through Wawchon and the Kowlaing pass and the second by way of the Sansi gorge; and the road from Waingmaw to Simā and thence by Palap to Simā-Pa in China. Graded mule-tracks have been made by the Public Works department to Sadon and Simā, the distance being 41 and 42 miles respectively; and other Government roads connect Maingna with Kwitu, a distance of 14 miles, Mogaung with Kamaing (27 miles), Kamaing with Nanyaseik (13 miles), Hopin on the railway line with Lonton on the Indawgyi Lake (28 miles), and Pungatong on the Sadon-Waingmaw road with Loingu on the N'maikha (18 miles). All these roads are partly bridged, but are unmetalled, and are maintained from Provincial funds. Rough mule-tracks connect Sadon with Simā and Simā with Nahpaw, and are cleared of jungle yearly by civil officers, the cost being met from Provincial funds. The tracks maintained from the District fund are: from Mogaung to Tapaw, 6 miles; from Mogaung to Koywa, 5 miles; and from Kamaing to Namlik village, 21 miles. Several ferries cross the Irrawaddy, the most important of which connects Myitkyinā with the eastern bank.

Administration. For the purposes of administration the District is divided into two subdivisions: the MYITKYINĀ subdivision and township; and the Mogaung subdivision, comprising the MOGAUNG and KAMAING townships. The Kachin Hills are administered under the Kachin Hill Tribes Regulation of 1895. In the Myitkyinā township there are three civil officers' charges: the Sadon, Simā, and Myitkyinā hill tracts. The first two are under special civil officers stationed at Sadon and Simā, the last is in charge of

the subdivisional police officer at Myitkyinā. The hills west of the Irrawaddy are administered by the subdivisional officer of Mogaung and the township officer of Kamaing as civil officers. At the District head-quarters are the *akunwun* in subordinate charge of the revenue, and the treasury officer. Myitkyinā is the head-quarters of the Executive Engineer in charge of the Myitkyinā Public Works division, comprising the Myitkyinā, Sadon, and Kathā subdivisions; and of the Deputy-Conservator of Forests in charge of the Myitkyinā division, which, except for a small area in the west, is conterminous with the District.

There are no special civil judges. The subdivisional and township officers do all the civil work in their respective courts. Petty civil cases in the Kachin hill tracts are settled by the *duwas* or headmen. Under the Kachin Hill Tribes Regulation of 1895 the Deputy-Commissioner is vested with the powers of a Sessions Judge in cases arising in these tracts, the Commissioner confirming death sentences. The *duwas* are also allowed to settle petty criminal cases according to tribal custom. As in Bhamo District, the smuggling of opium from China and the Kachin Hills is very common, and the District is never wholly free from crimes of violence committed by the Kachins.

The revenue is made up of the *thathameda* tax, which is paid by the non-Kachin population at the rate of Rs. 10 per household; the tribute levied from Kachins at the rate of Rs. 5 per house in the tracts under the civil officers of Mogaung and Kamaing, and at a lower rate elsewhere; land revenue paid by all cultivated lands in the plains; royalty on minerals; and revenue from stamps, excise, and fisheries. Nearly all the land is state land, the revenue payable being the value of one-tenth of the gross produce (as fixed by the township officer with the aid of assessors), except on lands given out on lease, on which a rate of Rs. 1-8 per acre is levied, these being the only surveyed lands in the District.

The growth of the revenue since the formation of the District is shown in the following table, in thousands of rupees:—

	1895-6.	1900-1.	1903-4.
Land revenue . .	...	8	20
Total revenue . .	1,53	1,80	1,88

The *thathameda*, which is at present the main source of revenue, increased from Rs. 46,000 in 1900-1 to Rs. 73,000 in 1903-4.

The income of the District fund, which is derived chiefly from bazars and ferries, was Rs. 18,000 in 1903-4. No municipalities have been constituted.

Under the District Superintendent of police are 2 Assistant Super-

intendents in charge of the subdivisions, an inspector, 4 head constables, and 96 men. There are 4 civil police stations and an outpost, with the addition of village police at Lonton, Sinbo, Sadon, and Simā. The District is garrisoned by a strong force of military police, consisting of 9 British officers, 41 native officers, and 1,612 rank and file. Of these, 947 are stationed at Myitkyinā; and posts are held at Mogaung, Kamaing, Fort Harrison (Sadon), Fort Morton (Simā), and Wayabu on the N'maikha, at each of which is an assistant commandant, also at Nahpaw (in the cold season), Lapye, Waingmaw, Lonton, N'pum Bum, Sinbo, and Palawgyi. There is no jail, prisoners being sent to Kathā when sentenced to imprisonment for a term exceeding one month.

The proportion of persons able to read and write was shown in 1901 as 28 per cent. in the case of males and 2 per cent. in the case of females, or 17 per cent. for both sexes together. These figures, however, leave out of consideration the population of the 'estimated' tracts, where the number of literate persons must have been infinitesimal. A school for Kachin children is maintained by the American Baptist Mission, but most of the schools are monastic, and in the hill areas even the elementary teaching of the *pongyi kyaung* is absent. In 1904 the institutions included one secondary, 21 primary, and 61 elementary (private) schools, with an attendance of 1,188 pupils (including 90 girls), as compared with 1,164 in 1901. The expenditure on education in 1903-4 was Rs. 1,600, derived wholly from Provincial funds.

There are 6 hospitals, with accommodation for 67 in-patients. In 1903 the number of cases treated was 20,054, including 795 in-patients, and 300 operations were performed. The total expenditure of Rs. 26,000 is derived almost wholly from Provincial funds. A number of patients were treated in the hospitals at the different military police outposts.

In 1903-4 the number of persons successfully vaccinated was 772, representing 11 per 1,000 of population.

[I. Errol Gray, *Diary of a Journey to the Bor Khamti Country and Sources of the Irrawaddy* (1893); Prince Henry of Orleans, *Du Tonkin aux Indes* (Paris, 1898).]

Myitkyinā Subdivision.—Eastern subdivision and township of Myitkyinā District, Upper Burma, lying between 24° 37′ and 25° 45′ N. and 96° 42′ and 98° 20′ E., with an area of 4,500 square miles. It comprises the Irrawaddy valley, here of considerable width, and the hills up to the Chinese frontier. Within its geographical limits are the three Kachin Hill Tracts, administered under the Kachin Hill Tribes Regulation by civil officers with head-quarters at Sadon in the north-east, Simā in the south-east, and MYITKYINĀ (population, 3,618), the head-quarters of the District and township. The

population of the township, excluding the first two of these tracts, was 17,560 in 1901; that of the Sadon tract being 14,012, and that of the Simā tract 7,273. The Myitkyinā Hill Tract was not formed till 1904. In the plains, Shans, Burmans, and Kachins are represented in the ratios of 7, 3, and 1 approximately; elsewhere the inhabitants are practically all Kachins. In 1901 the subdivision contained 582 villages, of which 477 were in the Kachin Hill Tracts as then constituted. In 1903-4 the area cultivated was 16 square miles, in addition to *taungyas*. The land revenue and *thathameda* amounted to Rs. 46,000.

Myitkyinā Town.—Head-quarters of the District of the same name in Upper Burma, situated in 25° 23′ N. and 97° 24′ E., on a level plain surrounded by hills on the western bank of the Irrawaddy, and at the terminus of the Sagaing-Myitkyinā railway, 724 miles from Rangoon. Population (1901), 3,618. The station has risen to importance only since the British occupation. Prior to 1892 it was a small Shan-Burmese village, its name denoting the fact that it was near to the banks of the great river, the Irrawaddy; and even now the military police and the officials form more than a fourth of the inhabitants. The town was attacked by a party of Sana Kachins in December, 1892, when the military police *sūbahdār*-major was killed and the subdivisional officer's courthouse and residence were burnt; but since then its history has not been marked by any stirring incidents. Myitkyinā is increasing in importance as an exchange for Chinese traders, who bring large quantities of opium, and take away india-rubber and jade and foreign commodities brought up by rail. Details of the frontier trade, which converges almost entirely at Myitkyinā, are given in the District article. The town contains a bazar and the usual public buildings.

Myitmaka.—River of Lower Burma. *See* RANGOON RIVER.

Myitnge (or Doktawaddy).—River of Burma, one of the principal tributaries of the Irrawaddy. It rises in about 23° 18′ N. and 98° 23′ E., in the Northern Shan State of North Hsenwi, where it is known as the Nam Tu. Its course is in the main south-westerly, and first passes through the States of North Hsenwi, Tawngpeng, and Hsīpaw, the first and last of which have their chief towns on its banks. For the latter half of its course of 130 miles the river forms the boundary, first between the States of Hsīpaw and Lawksawk, and next between the Districts of Mandalay and Kyaukse. It falls eventually into the Irrawaddy about 12 miles south of Mandalay, immediately opposite the town of Sagaing. The Myitnge is navigable only up to the point at which it reaches the plains. The Rangoon-Mandalay Railway crosses it near its mouth, and it will shortly be bridged at Hsīpaw. The principal tributary is the Nam

Ma, which joins it from the east, a little to the east of the town of Hsīpaw.

Myittha.—Southern subdivision and township of Kyaukse District, Upper Burma, lying between 21° 12′ and 21° 33′ N. and 95° 57′ and 96° 25′ E., with an area of 277 square miles. The population was 43,645 in 1891, and 56,752 in 1901, distributed in 310 villages. The head-quarters are at Myittha (population, 3,023), on the railway 12 miles south of Kyaukse town. The railway runs north and south through the centre of the township, the portion to the east, drained by the Panlaung river, being a flat plain bounded by the Shan plateau, with a scanty rainfall, but a good supply of irrigation canals; while the western portion, once the Dayegaung township, is watered by the Samon river and the Sama canal. In 1903-4 the township contained 104 square miles under cultivation, of which 75 square miles were irrigated, and the land revenue and *thathameda* amounted to Rs. 3,24,000.

Mylliem (*Mulliem*).—Petty State in the Khāsi Hills, Eastern Bengal and Assam, in the immediate vicinity of Shillong. The population in 1901 was 17,863, and the gross revenue in 1903-4 was Rs. 9,619. The principal products are rice, potatoes, maize, and millet. The manufactures are iron hoes and baskets. There are deposits of iron in the State, but they are not worked.

Mymensingh District (*Maimansingh*).—District in the north of the Dacca Division, Eastern Bengal and Assam, lying between 23° 57′ and 25° 26′ N. and 89° 36′ and 91° 16′ E., with an area of 6,332 square miles. It derives its name from the old *pargana* or fiscal division of Maimansingh. On the north and east the District marches with Assam, being bounded on the north by the Gāro Hills, and on the east by Sylhet; on the south-east it adjoins Tippera, and on the south Dacca; on the west it is separated by the Jamunā (or Brahmaputra) from the Districts of Pābna, Bogra, and Rangpur.

Physical aspects.

Until the beginning of the nineteenth century the main stream of the Brahmaputra flowed through the middle of the District from north to south; and although it now passes along the western boundary and the Old Brahmaputra has shrunk to a mere fraction of its former volume, its channel cuts the District into two great natural divisions with a marked difference between the country on either bank. The people to the east of it resemble in their dialect, social customs, and observances those of the adjoining District of Sylhet, while those to the west are like the inhabitants of Pābna, Dacca, and Farīdpur. To the east the country is intersected by marshes or *haors*, where large herds of buffaloes are grazed in the cold season, and the whole country is submerged during the rains, except the crowded village sites which are artificially

raised above the ordinary flood-level. The general elevation of the country west of the Old Brahmaputra is higher, and it contains a great part of the formation known as the MADHUPUR jungle, which stretches northwards from the boundary of Dacca District almost as far as the town of Mymensingh. This tract, which may be said to constitute a third natural division of the District, has an average height of about 40 feet above the level of the plains, and nowhere exceeds 100 feet; it is about 45 miles in length and from 6 to 16 miles in breadth, with a total area of about 420 square miles. The formation, which consists of a stiff layer of red ferruginous clay resembling that of the Bārind in North Bengal, is of considerable depth and capable of offering a tenacious resistance to the erosive action of rivers; and when the Old Brahmaputra, after having raised its bed and lost its velocity, was no longer able to hold its own against the Meghnā, this bank of clay forced it to swing westwards and to mingle its waters with those of the Jamunā. The Susang hills rise on the northern border; but elsewhere the District is level and open, consisting of well-cultivated fields, dotted with villages, and intersected by numerous small rivers and channels.

The Madhupur jungle divides the District into two portions. The western and smaller portion is watered and drained by the river system connected with the JAMUNĀ, the eastern by the Old BRAHMAPUTRA and its branches together with other numerous streams, which, issuing from the Gāro Hills on the north, flow eastwards and southwards into the Surmā and Meghnā. The numerous branches and tributaries of the Jamunā afford exceptional facilities for river trade; of the former, the Dhaleswarī, and of the latter, the Jhinai, an effluent of the Old Brahmaputra, are the most important. The SURMĀ (also known as the Dhaleswarī or Bheramonā) comes down from the Surmā valley in Assam and forms generally the eastern boundary, taking the name of the MEGHNĀ in the extreme south-east of the District. Two branches of the Meghnā, the Dhanu and the Ghorā-utra, are navigable throughout the year. The Kāngsa, a narrow stream, but deep and navigable throughout the year by boats of considerable burden, forms the boundary for a short distance between Mymensingh and Sylhet. There are several marshes in the east and south-east of great size and depth, which swarm with fish.

The greater part of the District is covered with recent alluvium, which consists of coarse gravels near the hills, sandy clay and sand along the course of the rivers, and fine silt consolidating into clay in the flatter parts of the river plain; beds of impure peat also commonly occur. The red ferruginous clay of the Madhupur jungle belongs to an older alluvial formation.

The District contains no Government forests, but the Madhupur

jungle is covered with a dense growth of tall trees overrun with creepers, with numerous large grasses at their base. The forest is similar in composition to that under the Himālayan range, containing a mixture of *Leguminosae*, *Combretaceae*, *Anacardiaceae*, *Urticaceae*, *Meliaceae*, and *Sapindaceae*. In the north the Susang hills are covered with a thick thorny jungle. The surface of the marshes in the east and south-east of the District either shows huge stretches of inundated rice, or is covered by matted floating islets of sedges and grasses and water-lilies, the most striking being the *makana* (*Euryale ferox*); while the river banks and the artificial mounds on which habitations are situated are, where not occupied by gardens, densely covered with a scrubby jungle of semi-spontaneous species, from which rise bamboos with a few taller trees, among which the commonest is the *jiyal* (*Odina Wodier*) and the most conspicuous the red cotton-tree (*Bombax malabaricum*).

Leopards are found throughout the District, and tigers, buffaloes, and wild hog are numerous in the Madhupur jungle and the sub-montane tracts in the north. Deer are abundant in the same localities, the *sāmbar* (*Cervus unicolor*) and the hog deer being the most common; the barking-deer is also found, and the *barasinghā* (*Cervus duvauceli*) is also met with in the grassy plains at the foot of the hills. Elephants abound in the Gāro and Susang hills, and occasionally commit great depredations among the crops in the vicinity. The rivers and marshes swarm with fish, which are dried at Kishorganj and exported to Assam, Chittagong, and Rangpur.

The temperature changes but little between April and October; the average maximum falls from 91° in April to 86° in October, while the highest average minimum is 78° in July, August, and September, and the mean is almost constant at 82°. In January the average minimum falls to 53° and the mean temperature to 64°. The monsoon rainfall begins in May and, owing to the ascensional motion of the monsoon current caused by the Gāro Hills, is heavier throughout the season than in any other inland tract of Eastern Bengal. The fall is 11 inches in May and 17·9 in June, after which it slowly diminishes to 12·3 in September; the average fall for the year is 86 inches. The heaviest fall recorded was 134 inches in 1865, and the lightest 57 inches in 1883. Though floods may occur in any monsoon month, very heavy precipitation occurs either early or late in the season, being due to depressions from the Bay which break up on reaching the Assam Hills.

The earthquake of 1885 caused considerable damage, especially along the north of the District, which lay on the arc of greatest intensity. The great earthquake of 1897 shook the District even more violently, especially in the north, below the Gāro Hills, in the

Jamālpur and Netrakonā subdivisions. Throughout the District brick buildings were destroyed or seriously damaged; houses were half buried; sand was upheaved through fissures in the soil, and spread over the surface, damaging the rice crop; wells ran dry, and tanks had their bottoms raised by the upheaval of the soil. The mischief, however, did not end here, for the beds of a large number of rivers formerly navigable were raised, rendering boat traffic impracticable except during the rains, roads and bridges were injured, and considerable damage was also done to the permanent way and bridges on the Dacca-Mymensingh Railway, where traffic was suspended for a fortnight. The cost of repairs in Mymensingh town to Government buildings alone was estimated at a lakh; the private losses in the whole District were estimated at 50 lakhs, while 50 lives were lost.

History.

In ancient times the District formed part of the old kingdom of Prāgjyotisha, or Kāmarūpa as it was subsequently called, whose ruler Bhagadatta was one of the great chiefs who is said to have fought at the battle of Kurukshetra. In the Mahābhārata he is styled the king of the Kirātas, and his kingdom is said to have extended to the sea. His capital was at Gauhāti in Assam, but the site of a palace believed to have been erected by him is still pointed out in the Madhupur jungle at a place known as Bāra Tīrtha ('twelve shrines'), where a fair is held annually in April. The kingdom was ruled by a succession of princes of Mongoloid stock, and was still flourishing when visited by Hiuen Tsiang in the seventh century. At that time its southern boundary seems to have corresponded with the present Dhaleswarī in Dacca District, while it extended westwards as far as the Karatoyā river. The portion of the District to the west of the Old Brahmaputra was included in Ballāl Sen's dominions, but not so the tract to the east of that river; the system of Kulinism instituted by that monarch is still in full force in the former, while it is almost unknown in the latter, tract. The Muhammadans first entered Bengal in 1199, but Eastern Bengal was not subdued till later. In 1351 the whole province was united by Shams-ud-dīn Ilyās Shāh; and Sonārgaon, near Dacca, became the residence of the governors of Eastern Bengal. Eastern Bengal subsequently became the seat of dissensions and rebellions, but it was again subdued by Mahmūd Shāh in 1445. His family reigned till 1487, and during their time this tract formed the province of Muazzamābād, which apparently extended to Laur in Sylhet at the foot of the Gāro Hills. Local tradition ascribes the subjugation of eastern Mymensingh to Sultān Husain Shāh and his son Nusrat Shāh. The former established a fort at Ekdāla, not far from the southern boundary of the District, whence he sent an expedition against the Ahoms. *Pargana* Husainshāhi is said to have been named after him, and Nusratshāhi,

including Susang and twenty-one other *parganas*, after his son. The conquest does not, however, seem to have been complete, and in the latter half of the sixteenth century we find that Eastern Bengal was again split up into a number of petty States ruled by independent chiefs locally known as Bhuiyās. One of the best known of these, Isa Khān, the founder of the great Mymensingh family known as the Dīwān Sāhibs of Haibatnagar and Jangalbāri, had his head-quarters at Sonārgaon, and is said to have ruled over a large kingdom, including the greater part of Mymensingh, till his death in 1598; he is mentioned by Ralph Fitch, who visited Sonārgaon in 1586, as being the 'chief of all the other kings.' Another important Bhuiyā of this period, ruling over Bhāwāl in Dacca and the adjoining *pargana* of Ran Bhāwāl in Mymensingh, was the head of the Ghāzī family founded by Palwān Shāh, a military adventurer of the early fourteenth century.

At the time of the settlement of 1582 by Todar Mal, Mymensingh formed part of the great *sarkār* Bājūha, which stretched eastward from *sarkār* Bārbakābād across the Brahmaputra to Sylhet, and southward as far as the city of Dacca. When the District passed into the hands of the Company, on the grant of the Dīwāni in 1765, it formed part of the *niābat* which extended from the Gāro Hills on the north to the Sundarbans on the south, and from the Tippera Hills on the east to Jessore on the west, so called because it was governed by a *naib* or deputy of the Nāzim. The District of Mymensingh was formed about 1787, and placed under one Collector with the revenue charge of Bhuluā, which comprised the Districts of Tippera and Noākhāli. This union lasted only till 1790, when Bhuluā was again separated; and in 1791 the head-quarters of the Collector, which had apparently been at Dacca, were transferred to their present site in Mymensingh. Some changes of jurisdiction have since taken place, of which the most important were in 1866, when the Sirājganj *thāna* was transferred to Pābna, and the Dīwānganj and Atiā *thānas* were added from Bogra and Dacca respectively.

Archaeological remains are meagre. The most important is an old mud fort covering 2 square miles at Garh Jaripā near Sherpur, probably built more than 500 years ago as an outpost to check the incursions of the hill tribes.

Population.

The population recorded at the Census of 1872 was 2,351,695, rising to 3,055,237 in 1881, to 3,472,186 in 1891, and to 3,915,068 in 1901. The climate is generally salubrious, but the Durgāpur *thāna* at the foot of the Gāro Hills has a reputation for unhealthiness. The majority of the deaths are ascribed to fever. Cholera and small-pox often occur in an epidemic form. Leprosy is more common than elsewhere in Eastern Bengal.

The chief statistics of the Census of 1901 are shown below :—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Mymensingh	1,849	2	2,367	977,476	529	+ 14·6	34,207
Netrakonā	1,148	1	1,965	574,771	501	+ 7·1	18,797
Jamālpur	1,289	2	1,747	673,398	522	+ 16·1	20,180
Tangail	1,061	1	2,030	970,239	914	+ 12·9	45,253
Kishorganj	985	2	1,661	719,184	730	+ 11·8	27,949
District total	6,332	8	9,770	3,915,068	618	+ 12·8	146,386

There is little distinction between the rural and urban population, as even in the towns the houses are scattered, and a large proportion of the inhabitants are engaged in purely agricultural pursuits. Outside the so-called towns there is no village with more than 5,000 inhabitants, and nearly half the population lives in villages with less than 500. Of the towns, the largest are JAMĀLPUR, TANGAIL, KISHORGANJ, and NASĪRĀBĀD, the head-quarters. Owing to the sparse population in the Madhupur jungle and in the hilly north-eastern tract, the District, as a whole, is less thickly inhabited than other parts of Eastern Bengal. In some parts, however, the population is very dense, and two *thānas* of the Tangail subdivision and one in the centre of the District support more than 1,000 persons per square mile. During the ten years ending 1901, every *thāna* in the District with one exception showed an increase of more than 8 per cent., the only tract which did not share in the general advance being the swampy north-eastern *tarai* in the Durgāpur *thāna*, which supports only 299 persons per square mile.

Mymensingh suffers a slight loss by the ordinary movements of population, chiefly in the direction of Rangpur, whither some of the riparian inhabitants have gone to cultivate the accretions formed on the right bank of the Jamunā. On the other hand it gains considerably from Tippera, whose women are in request as wives and maidservants. Large numbers of labourers flock in from Sāran and the United Provinces during the winter, and are employed on earthwork, *pālki*-bearing, and domestic service. The vernacular is a dialect of Bengali known as the Eastern or Musalmānī dialect ; some people of Gāro origin talk Haijong, a corrupt *patois* of Bengali. Muhammadans number 2,795,548, Hindus 1,088,857, and Animists 28,958 ; the first increased by more than 16 per cent. during the decade ending 1901, and now form 71·4 per cent. of the population.

The majority of the Muhammadans are probably the descendants of converts from the aboriginal races whose representatives are still numerous in the District : namely, the Namasūdras (156,000) and the

Rājbansis or Koch (52,000). Of the common Hindu castes of Eastern Bengal the Kaibarttas (131,000) are the most numerous. Gāros and other cognate aboriginal races—such as Haijongs, Hādis, and Dālus—are found along the foot of the Gāro Hills. The Gāros are for the most part Animists, but the number so returned is diminishing, owing to the well-known tendency of the aboriginal tribes to adopt Hinduism as they approach civilization. Four-fifths of the population, or more than three million persons, are supported by agriculture, 10·2 per cent. by industries, 1 per cent. by commerce, and 1·3 per cent. by the professions.

The Victoria Baptist Foreign Mission has been in the District since 1837, and has three branches, at Nasīrābād, Tangail, and Birisiri. Its work lies mainly among the Gāros; and the Christians enumerated in the District, who increased from 211 in 1891 to 1,291 in 1901, are mainly Gāro converts. Considerable attention is paid to education; a girls' orphanage is maintained at Nasīrābād, a normal school for Gāro teachers and a girls' boarding school at Birisiri, and a number of primary schools.

Agriculture.

The greater portion of the District is a highly cultivated plain watered by the great rivers and their offshoots and feeders, but the Madhupur jungle is for the most part waste. The north lies comparatively high and is generally above flood level, but the south is lower and is subject to annual inundations and deposits of fertilizing silt. In the neighbourhood of the big rivers the soil is a sandy loam, admirably suited for jute and spring crops.

The principal agricultural statistics for 1903–4 are shown below, areas being in square miles:—

Subdivision.	Total.	Cultivated.	Cultivable waste.
Mymensingh . .	1,849	1,124	180
Netrakonā . . .	1,148	477	164
Jamālpur . . .	1,289	758	125
Tangail . . .	1,061	669	94
Kishorganj . . .	985	730	62
Total	6,332	3,758	625

Rice forms the staple food-grain of the District; the winter rice covers 44 per cent. of the cultivated area, early rice 15½ per cent., and spring rice 5 per cent. The *aus* or early rice is sown from March to April and even May, and is reaped from the middle of May till the middle of September. The harvest takes place earliest in the west of the District, and latest in the southern tracts. In the east only two kinds of *aus* are cultivated—the *jali* and the *aus* proper; in the west the varieties are much more numerous, but all of them do best on

a dry soil. Winter rice is sown in the late spring and reaped in the autumn and early winter; some of the varieties grow in marshy land, while the rest grow best in dry lands. The *rupā* or transplanted winter crop is grown in moist soil, being sown in June, transplanted a month or two later, and reaped in November, December, and January. The long-stemmed rice, which rises with the floods, is common in the deep swamps. The spring rice, known in the District as *borā*, is sown early in the winter and reaped during the spring months; it is a transplanted crop, and grows best in low marshy lands.

A fourth of the Bengal jute crop is raised in Mymensingh District, where the fibre occupies 1,015 square miles, or 27 per cent. of the cultivated area; it is grown in all parts, but particularly in the rich alluvial tracts formed by the Brahmaputra between Ghafargaon and Bhairab Bāzār. Oilseeds cover 19 per cent. of the cultivated area, yielding nearly an eighth of the rape and mustard grown in Bengal. Pulses are extensively grown, and a little wheat and barley are raised. There are considerable plantations of sugar-cane in the Husainshāhi and Joar Husainpur *parganas*. The betel-vine is cultivated, and tobacco is widely grown. Irrigation is little practised, except for the spring rice crop. Owing to the regular and copious rainfall, famine is unknown, while the large export of jute and oilseeds brings large sums of money into the District; and there is consequently little need for Government loans.

No attention is given to the feeding or breeding of cattle, and the local varieties are weak and undersized. Young bulls are allowed to run among the herd before they are fit for the plough, and are the only sires of the young stock. In the cold season cattle are grazed on the rice stubble; but during the rains pasturage is very limited, and the cattle get only what they can pick up on the sides of marshes, tanks, and roads. In the submerged tracts they are fed on straw or grass. In the south-east of the District, however, there are considerable areas of rich pasture, where clarified butter (*ghī*) and the so-called Dacca cheeses are prepared; in the Madhupur jungle and Susang hills abundant pasturage is also available. Cattle of a better class, imported from Bihār, are in demand throughout the District; and buffaloes are also used for agricultural purposes, especially along the foot of the Gāro Hills. Pack-ponies of a small and weak variety are in common use.

A large number of fairs are held, some of considerable antiquity and largely attended. At the Saraswatī *mela* held in Nasīrābād in February, and at the Industrial and Agricultural Exhibition recently instituted at Tangail, agricultural produce and stock are exhibited for prizes.

In former times the muslins of Kishorganj and Bājitpur were of

considerable note, and the East India Company had factories at both places; weaving is still widely practised and supports more than 30,000 persons. Cloth (*endi*) is woven at Sāndhikonā in the Netrakonā subdivision from wild silk. Fine *sītalpāti* mats are made on a large scale in the east and south-east, where the marshes furnish an abundant supply of reeds (*Phrynium dichotomum*) for the purpose. Brass and bell-metal ware is manufactured at Islāmpur in the Jamālpur subdivision and at Kāgmāri in Tangail, and the cutlery of Kārgaon and Bājitpur in the Kishorganj subdivision has a local reputation. Cane boxes, molasses, and mustard oil are also prepared in some quantities.

Trade and communications.

Trade is carried on chiefly by rail and river; where there are no rivers, carts and pack-ponies are used. The chief export is jute; in 1903-4 the amount carried direct to Calcutta exceeded 76,000 tons, and more than double this quantity was probably baled at Sirājganj and Nārāyanganj for export. Other exports are pulses, rice, oilseeds, hides, raw cotton, cheese, *ghī*, dried fish, and brass-ware. The principal imports are salt, kerosene oil, European piece-goods, cotton twist, molasses, sugar, corrugated iron, coal and coke from Calcutta; tobacco from Rangpur; raw cotton from the Gāro Hills; cotton, betel-nuts, and chillies from Tippera; and coco-nuts from the southern Districts. A large proportion of the trade with Calcutta is at present carried via Nārāyanganj, but the recent extension of the railway to Jagannāthganj will possibly in time divert this portion of the traffic to the more direct route via Goalundo. The large trade-centres mark the lines of water communication; SUBARNAKHĀLI, lying on the Jamunā and connected by road with both Jamālpur and Nasīrābād, is the principal emporium in the west of the District. NASĪRĀBĀD, the head-quarters town, and JAMĀLPUR are on the banks of the Old Brahmaputra, on which also lie Sāltia, a large cattle market, DATT'S BĀZĀR, and BHAIRAB BĀZĀR; the latter, at the point of the confluence with the Meghnā, is the largest and most important mart in the District. KĀTIĀDI, KARIMGANJ, KISHORGANJ, and Nīlganj are markets whence large quantities of jute are sent via the Lakhyā and Meghnā to the presses at Nārāyanganj. In the east and south-east are Mohanganj and Dhuldiā, large fish markets; and in the north are Hāluāghāt, at the foot of the Gāro Hills, where the hillmen bring in their merchandise, NALITĀBĀRI, and SHERPUR. Among the Hindus, the Telis and Sāhās are the chief trading castes; there is also a large community of Mārwāris. Middlemen and brokers are usually Musalmāns.

The Dacca-Mymensingh branch of the Eastern Bengal State Railway (metre-gauge) enters the District at Kaoraid, whence it runs north through Nasīrābād to Jamālpur, and from thence south-west to join

the Jamunā at Jagannāthganj, having a total length within the District of 87¼ miles. The railway has already done much to open out the country, and the proposed extensions to Tangail and Netrakonā will develop those subdivisions. The railway has seventeen stations within the District, most of which are connected by feeder roads with the marts of the interior. The most important roads are those connecting the head-quarters town with Dacca, Subarnakhāli on the Jamunā, Kishorganj via Iswarganj, Durgāpur, Tangail via Phulbāria, Jamālpur, and Netrakonā. Including 1,620 miles of village roads, the District in 1903–4 contained 2,484 miles of road, of which only 45 miles were metalled.

Steamers ply on the big rivers which flow along the east and west of the District. The most important of these are the daily services between Calcutta and Cāchār via the Sundarbans, and between Goalundo and Dibrugarh, both of which stop at several stations within the District. The usual country boats of Eastern Bengal are employed for trade, and dug-outs are used on the hill rivers in the north. There are 171 ferries, of which 5 are Provincial, while the remainder belong to the District board. The most important are those at Sambhuganj, Jamālpur, Husainpur, and Piārpur.

Administration.

For administrative purposes the District is divided into five subdivisions, with head-quarters at NASĪRĀBĀD, NETRAKONĀ, JAMĀLPUR, TANGAIL, and KISHORGANJ. They are of unusual size, having an average area of 1,266 square miles, and a population of 783,000. Subordinate to the Magistrate-Collector, the staff at head-quarters consists of a Joint-Magistrate, seven uncovenanted Deputy-Magistrate-Collectors, and one Sub-deputy Magistrate-Collector. Three of the Deputy-Magistrate-Collectors are employed exclusively on revenue work, and there is also a Deputy-Collector in charge of the partition work of both Dacca and Mymensingh. The other four subdivisions are each in charge of a Deputy-Magistrate-Collector, the subdivisional officer at Tangail being assisted by a Deputy-Collector, and at Netrakonā by a Sub-Deputy-Collector.

Civil work is in charge of the District Judge, who is also Sessions Judge; subordinate to him are an additional District and Sessions Judge, three Subordinate Judges, one additional Subordinate Judge for both Faridpur and Mymensingh, and nineteen Munsifs: namely, three at Mymensingh, and fifteen permanent Munsifs and one temporary Additional Munsif at Tangail, Netrakonā, Kishorganj, Bājitpur, Iswarganj, Pingnā, Jamālpur, and Sherpur. The criminal courts include those of the Sessions Judge, the District Magistrate, and the above-mentioned Joint and Deputy-Magistrates. The wealth and the litigious habits of the people make the criminal and civil work very

heavy, and disputes about land give rise to numerous and complicated cases. The District has gained an evil notoriety for kidnapping, abduction, and rape; and in 1899 it was found necessary to depute special officers to inquire into such cases.

At Todar Mal's settlement of 1582 the present District fell within *sarkār* Bājūha, which also contained a portion of Dacca District, and it was subsequently included in the province of Dacca, from which it was not separated until 1787; the separate revenues collected by the Muhammadan government cannot therefore be ascertained. The revenue permanently settled in 1793 seems to have amounted to 7·20 lakhs, which in 1903–4 had risen to 7·68 lakhs (payable by 9,534 estates), mainly by the resumption and assessment in the first half of the nineteenth century of lands held free of revenue under invalid titles. In addition, Rs. 70,000 is payable by 178 temporarily settled estates, and Rs. 26,000 by 80 estates held direct by Government. At the time of the Permanent Settlement only a quarter of the District was cultivated, and the result is that the share of the produce of the soil which is now taken as revenue is probably smaller than in any other part of Bengal. It is equivalent to only R. 0–5–8 on each cultivated acre, or 11·8 per cent. of the rental, which itself by no means represents the real value of the lands to the *zamīndārs*, as they impose a large premium, varying from Rs. 5 to Rs. 100 per acre, at the beginning of each tenancy. A few tenures are peculiar to the District. The *nagani jama tāluk*, an under-tenure held subject to a quit-rent, is a relic of the period when tenants were in demand, having been created by former Rājās of Susang to induce people to settle on their estates. A *dikhli tāluk* is an absolute transfer in consideration of the payment of a lump sum, in addition to rent fixed in perpetuity; and a *daisudhi ijāra* is a usufructuary mortgage either for a definite period or until repayment. Rents vary widely over the District, being highest in *pargana* Juānshābi, and lowest in *pargana* Khāliājuri. The rates for homestead land range from 9½ annas to Rs. 8–9–6; rice lands are divided into three classes, the rates varying from Rs. 1–14–9 to Rs. 4–5–6 for first-class lands, and from Rs. 1–3 to Rs. 2–7–6 for those of the third class.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	8,21	8,26	8,63	8,65
Total revenue . .	19,10	23,35	27,78	27,87

Outside the eight municipalities of NASĪRĀBĀD, JAMĀLPUR, SHERPUR, KISHORGANJ, BĀJITPUR, MUKTĀGĀCHA, TANGAIL, and NETRAKONĀ,

local affairs are managed by the District board, with subordinate local boards at each of the subdivisional head-quarters. In 1903–4 the income of the District board was Rs. 3,81,000, of which Rs. 1,99,000 was derived from rates; and the expenditure was Rs. 4,37,000, including Rs. 2,63,000 spent on public works and Rs. 87,000 on education.

There are 19 police stations or *thānas* and 11 outposts. The regular force subordinate to the District Superintendent in 1903 consisted of 6 inspectors, 77 sub-inspectors, 38 head constables, and 592 constables, including those employed for patrolling purposes within the municipal areas. The rural police numbered 7,307 village watchmen and 714 head watchmen. The District jail at Nasīrābād has accommodation for 550 prisoners, and the lock-ups at the subdivisional head-quarters for 89.

Education is still very backward, and in 1901 only 3·7 per cent. of the population (6·9 males and 0·4 females) could read and write. A considerable advance, however, has been made since 1881. Education is most backward in the north of the District, and among the Muhammadans, only 3·3 per cent. of whose males are able to read and write, compared with 16·2 per cent. among the Hindus. The total number of pupils under instruction, which was 54,284 in 1882–3 and 51,082 in 1892–3, increased to 65,812 in 1900–1. In 1903–4, 67,266 boys and 5,878 girls were at school, being respectively 22·2 and 2·0 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 2,618, including 2 Arts colleges, 133 secondary schools, and 2,255 primary schools. The expenditure on education was 3·84 lakhs, of which Rs. 26,000 was met from Provincial funds, Rs. 83,000 from District funds, Rs. 2,000 from municipal funds, and 1·98 lakhs from fees. The chief educational institutions are the Mymensingh Government school and City College at Nasīrābād and the Pramatha Manmatha College at Tangail. Special institutions include 12 upper primary and 2 lower primary schools, maintained by the District board for the aboriginal tribes in the neighbourhood of the Gāro Hills and the Madhupur jungle.

In 1903 the District contained 33 dispensaries, of which 14 had accommodation for 137 in-patients. The cases of 370,000 out-patients and 2,082 in-patients were treated, and 11,253 operations were performed. The expenditure was Rs. 49,000, of which Rs. 2,000 was met from Government contributions, Rs. 9,000 from Local and Rs. 11,000 from municipal funds, and Rs. 27,000 from subscriptions.

Vaccination is compulsory only within municipal areas. Elsewhere there is still some opposition to it, but 154,000 successful vaccinations were performed in 1903–4, representing 25·4 per 1,000 of the population.

[Sir W. W. Hunter, *Statistical Account of Bengal*, vol. v (1875).]

Mymensingh Subdivision (*Maimansingh*).—Head-quarters subdivision of Mymensingh District, Eastern Bengal and Assam, lying between 24° 7′ and 25° 11′ N. and 89° 59′ and 90° 49′ E., with an area of 1,849 square miles. A large part of the subdivision consists of a level open plain, covered with well-cultivated fields and intersected by numerous small rivers and channels; but the south comprises the MADHUPUR jungle, where the country is more elevated and contains large jungle tracts. The population in 1901 was 977,476, compared with 853,020 in 1891. It contains two towns, NASĪRĀBĀD (population, 14,668), the head-quarters, and MUKTĀGĀCHA (5,888); and 2,367 villages. The density is only 529 persons per square mile, against an average of 618 for the District, owing to the inclusion of a large portion of the Madhupur jungle, in parts of which there are only 277 persons per square mile, compared with 1,025 in the Nandail *thāna*. There are important markets at SAMBHUGANJ and DATT'S BĀZĀR.

Mymensingh.—Town in Mymensingh District, Eastern Bengal and Assam. *See* NASĪRĀBĀD.

Myohaung Township.—Easternmost township of Akyab District, Lower Burma, lying between 20° 20′ and 20° 50′ N. and 93° 2′ and 93° 58′ E., partly in the valleys of the Kaladan and Lemro, partly on the slopes of the Arakan Yoma, with an area of 1,329 square miles. The population was 43,366 in 1891, and 49,978 in 1901. There are 282 villages. In consequence of the scarcity of population in the hill areas on the western slope of the Arakan Yoma, the density (37 persons per square mile) is lower than that of any other township in the District. The head-quarters are at MYOHAUNG or 'old town' (population, 2,833), for centuries the capital of the ancient kingdom of Arakan. The area cultivated in 1903–4 was 152 square miles, paying Rs. 2,00,000 land revenue.

Myohaung Village ('Old town').—Head-quarters of the township of the same name in Akyab District, Lower Burma, situated in 20° 35′ N. and 93° 12′ E., on a branch of the Kaladan, about 40 miles from Akyab and the Bay of Bengal. This village was formerly the capital of the ancient kingdom of ARAKAN. The seat of government is said to have been moved here from Dwārawadi, farther south in Sandoway District, about the close of the tenth century, in consequence of aggressions across the Arakan Yoma from the kingdom of Prome; and Myohaung remained the capital till Arakan was finally absorbed into the kingdom of Ava in the eighteenth century. In the first Burmese War Myohaung was one of the earliest points of attack. It was besieged by a British division which had marched by land from Bengal, and was captured after a stubborn resistance at the end of March, 1825. On Arakan passing under British rule at the close of the war, the official head-quarters were not located in the ancient

capital, but in the more accessible Akyab, at the mouth of the Kaladan; and Myohaung is now little more than a village. In 1901 its population amounted to 2,833.

The ruins of the ancient fort are still in existence; they consist of three square enclosures, one within the other, surrounded by masonry walls of very considerable thickness, built of stone and brick set in cement. The openings in the hills surrounding Myohaung also contain remains of defences. In the village itself the site of the old palace is still traceable.

Myothit.—Eastern township of Magwe District, Upper Burma, lying between 20° 0′ and 20° 19′ N. and 95° 13′ and 95° 51′ E., with an area of 403 square miles. The eastern portion of the township, watered by the Yin, lies low, and is extensively cultivated with rice. The western resembles the Myingun township, in so far as it has a dry soil on which only millet and sesamum are grown. The population was 33,994 in 1891, and 42,925 in 1901, distributed in 125 villages. Myothit (population, 1,638), on the Yin river, about 35 miles due east of Magwe, is the head-quarters. In 1903–4 the area cultivated was 107 square miles, and the land revenue and *thathameda* amounted to Rs. 6,500.

Mysore State (*Maisūr*).—Native State in Southern India, lying between 11° 36° and 15° 2′ N. and 74° 38′ and 78° 36′ E. It consists of an undulating table-land, much broken up by chains of rocky hills and scored by deep ravines. Its form is that of a triangle, with the apex to the south, at the point where the Western and Eastern Ghāt ranges converge in the group of the Nīlgiris. The general elevation rises from about 2,000 feet above sea-level along the north and south frontiers to about 3,000 feet at the central water-parting which separates the basin of the Kistna to the north from that of the Cauvery to the south. This watershed divides the country into two nearly equal parts, a little north of lat. 13° and as far as long. 77°, where a transverse line marks the eastern watershed. Several chains of hills, running chiefly north and south, subdivide the whole into numerous valleys, widely differing in shape and size. Isolated peaks of massive rock, called 'droogs' (from Sanskrit *durga*, 'hill-fort'), rear their heads on all sides to an elevation of 4,000 or 5,000 feet above the level of the sea. The area of the State is 29,433 square miles. The greatest length north and south is about 230 miles; east and west about 290 miles. It is bounded by Madras Districts on all sides except on the north-west, where it is bordered by two Bombay Districts, and towards the south-west, where Coorg intervenes.

Physical aspects.

The name is that of the capital, Mysore, for Maisūr (from *mahisha*, Sanskrit for 'buffalo,' reduced in Kanarese to *maisa*, and *ūru*, Kanarese

for 'town' or 'country'), which commemorates the destruction of Mahishāsura, a minotaur or buffalo-headed monster, by Chāmundi or Mahishāsura Mardani, the form under which the consort of Siva is worshipped as the tutelary goddess of the ruling family. It is the Mahisa-mandala of Asoka's time, and forms the main part of the region called throughout Hindu literature Karnāta or Karnātaka, a term now wrongly applied to the districts below the Eastern Ghāts (*see* CARNATIC).

Mysore is naturally divided into two regions of distinct character: the hill country, called the Malnād, on the west, confined to the tracts bordering or resting on the Western Ghāts (in Shimoga, Kadūr, and Hassan Districts); and the more open country in the east, known as the Maidān or Bayalshīme, comprising the greater part of the State, where the wide-spreading valleys and plains are occupied by numerous villages and populous towns. The Malnād is a picturesque land of mountain and forest, presenting the most diversified and beautiful scenery. The various parts of the Maidān take their character from the means of water-supply and the prevailing cultivation. The level plains of black soil, in the north, grow cotton or millets; the tracts in the south and west, irrigated by channels drawn from rivers, are covered with plantations of sugar-cane and fields of rice; those irrigated from tanks have gardens of coco-nut and areca palms; the wide tracts of red soil, in the east, yield *rāgi* and other 'dry crops'; the stony and wide-spreading pasture grounds, in the central parts of the country, are stretches of coarse grass, relieved by shady groves of trees.

From the massive group of the NĪLGIRIS, which command the southern frontier, stretch forth, north-west and north-east respectively, the WESTERN and EASTERN GHĀT ranges, between which the plateau of Mysore lies like a wedge. The hills within this table-land, though rarely in continuous connected chains, arrange themselves into systems crossing the country longitudinally, in directions more or less parallel to the Ghāt ranges, according to their proximity to one or the other. They attain their greatest elevation somewhat north of lat. 13°, where Mulainagiri (the highest point in Mysore), in the Bābā Budans, in the west, rises to 6,317 feet, and Nandidrọog, in the east, to 4,851 feet. The best defined of the interior ranges is a belt, from 10 to 20 miles wide, running between 77° and 77° 30′ E., from the BILIGIRI-RANGANS (4,195 feet), through Sāvandurga (4,024) and Sivaganga (4,559), north up to Maddagiri (3,935), and on by Nidugal (3,772) to Molakālmuru and the frontier. In the west a corresponding range, not more than 10 miles in width, runs north along meridian 75° 30′ E., from Ballālrāyandurga (4,940 feet) beyond Shikārpur, having on its east the big loop of the BĀBĀ BUDANS, whose peaks rise to over 6,000 feet.

Intermediate between these two internal ranges is a chain, with considerable intervals between its component parts, trending to the east on the south of the central watershed, and to the west on the north of it. Starting from the Wynaad frontier at Gopālswāmi Betta (4,770 feet), it passes by Nāgamangala to Chunchangiri (3,221), reappears to the west of Kibbanhalli in the Hāgalvādi hills (3,543), and crosses in a continuous belt through the middle of Chitaldroog District. Of minor ranges the most important is that of NANDIDROOG, commencing near the hill of that name, with several peaks of nearly equal height, and passing north by Gudibanda to the Anantapur country. In the west a similar medial chain, but of lower elevation, runs from east of the Bābā Budans through Sakunagiri (4,653 feet), by the Ubrāni hills and Basavāpatna, along the right bank of the Tungabhadra to the frontier, where it meets that river.

The drainage of the country, with a slight exception, finds its way east to the Bay of Bengal, and is divisible into three great river systems: that of the KISTNA on the north, the CAUVERY on the south, and the PENNER, PONNAIYĀR, and PĀLĀR on the east. The only streams flowing west to the Arabian Sea are those in the north-west, which, uniting in the Sharāvati, hurl themselves down the Ghāts in the magnificent GERSOPPA FALLS; and some minor streams which run down to South Kanara. A line drawn east from Ballālrāyandurga to Nandidroog, and thence south to Anekal, with one from Devarāyadurga north to Pāvugada, will indicate approximately the watershed separating the three main river basins. From the north of this ridge flow the Tunga and Bhadra, rising in the Western Ghāts and uniting in the TUNGABHADRA, which, after receiving the HAGARI or Vedāvati, joins the Kistna beyond the limits of Mysore near Kurnool. From the south, the HEMĀVATI (tributary the Yagachi), the Lokapāvani, Shimsha, and ARKĀVATI flow into the Cauvery, which rises in Coorg and takes a south-easterly course through the State, receiving also from the south the LAKSHMANTĪRTHA, the KABBANI or Kapila (tributaries the Nugu and Gundal), and the HONNUHOLE or Suvarnāvati. From the east of the watershed, in the immediate neighbourhood of Nandidroog, spring three main streams: namely, the Uttara Pinākini or PENNER (tributaries the Chitrāvati and Pāpaghni), which runs into the sea at Nellore; the Dakshina Pinākini or PONNAIYĀR, which reaches the sea at Cuddalore; and between them the PĀLĀR, whose mouth is at Sadras.

Owing to either rocky or shallow beds, none of these rivers is navigable in Mysore; but timber is floated down the Tunga, the Bhadra, and the Kabbani at certain seasons. Most of the streams are fordable during the dry months, but during floods traffic over them is often suspended until the water subsides. Though useless

for navigation, the main streams, especially the Cauvery and its tributaries, support an extensive system of irrigation by means of channels drawn from immense dams, called 'anicuts,' which retain the upper waters at a high level and permit only the overflow to pass down stream. The channels or *kālves* drawn from them meander over the country on either bank, following all the sinuosities of the ground, the total length maintained being upwards of 1,200 miles.

There are no natural lakes in Mysore; but the streams which gather from the hill-sides and fertilize the valleys are embanked at every favourable point in such a manner as to form series or chains of reservoirs called tanks (Kanarese, *kere*), the outflow from one at a higher level supplying the next lower, and so on all down the course of the stream at a few miles apart. These tanks, varying in size from small ponds to extensive lakes, are dispersed throughout the country to the number of nearly 30,000. The largest, Sūlekere, is 40 miles in circumference, but the Māri Kanave reservoir will exceed 90 miles. In the north-east are the spring-heads called *talpargi*, extending east of a line from Kortagere to Molakālmuru.

[1] Granites and granitic gneisses, regarded as of Archaean age, occupy the greater portion of the State, and traversing these are metamorphic schists of Pre-Palaeozoic age. There are besides, (*a*) more recent acid, basic, and ultra-basic dikes, penetrating both the former systems, and irrupted probably not later than Lower Palaeozoic times; (*b*) a deposit of laterite, widely distributed in extensive sheets or oftener in small isolated patches, forming an almost horizontal capping on the denuded surfaces of the older rocks; (*c*) some relatively unimportant alluvial and sub-aerial deposits.

The schistose rocks which traverse the great complex of granite and granitic gneiss, and are more or less folded down into it, form three well-marked bands running in a generally north and south direction. Two are of large size, and are known respectively as the Shimoga and Chiknāyakanhalli bands, from their proximity to those towns. The third is the Kolār band, very small in extent, but of the greatest economic importance. The two first named are southward extensions of the great bands in Dhārwār and Bellary[2]. The third is apparently an extension of a band running south along the Kadiri valley in Cuddapah, but a break of several miles appears to separate the two near the boundary line between Cuddapah and Mysore.

[1] The earliest account of the geology of Mysore was by Captain Newbold in 1844-50 (see articles on the 'Geology of Southern India,' *J. R. A. S.*, vols. viii, ix, xii). A State Geological department was formed under Mr. Bruce Foote in 1894, and is now under Dr. W. F. Smeeth, on whose notes this section is based.

[2] See Bruce Foote's 'Geological Features of the South Mahratta Country,' 'Geology of the Bellary District,' and other papers (*Memoirs, Geographical Survey of India*, vols. xii, xxv; and *Records, Geographical Survey of India*, vols. xv, xxi, xxii).

The Shimoga band crosses the Tungabhadra near Harihar, extends to the southern boundary of Kadūr District, and spreads from near Kadūr on the east to the edge of the Western Ghāts on the west, where it forms much of the high Ghāt country culminating in the Kudremukh at an elevation of 6,215 feet. From this point the western boundary is probably continuous up to Anantapur (Shimoga District). West of Anantapur the country is covered by a great spread of laterite, beneath which gneiss is exposed in deep nullahs.

The Chiknāyakanhalli band runs through the middle of the State in a north-north-west and south-south-east direction. At the northern boundary it is divided into two horns by the great granite *massif* of Chitaldroog. Thence it runs south-south-west as far as Turuvekere in Tumkūr District, with an average width of about 18 miles. Here it suddenly pinches; and the only continuous extension southward is a narrow band, with an average width of 2 to 3 miles, running from Baichihalli to the Karigatta hill, north of the Cauvery, opposite the east end of the island of Seringapatam. A little to the west of this narrow band are several small strings of schist near Myasandra, Nelligere, and Nāgamangala, some of which appear to be dikes[1]. An important schist belt lying throughout the east of this band has been discovered, the rocks of which resemble those of the Kolār band. The southern extension towards Sivasamudram is rock containing 50 per cent. of iron.

The Kolār band lies on the eastern side of the State. It extends north and south for a distance of 40 miles, with a maximum width of 4 miles, while three narrow strings extend southwards into North Arcot and Salem. In general outline the main portion of the band may be regarded as consisting of a southern portion about 12 miles long by 4 miles wide, in which the present Kolār Gold Field is situated; a northern portion about 12 miles long by 5 miles wide; and a narrow neck of schist about 10 miles long by 1 mile wide, connecting these two parts. The band is composed essentially of hornblendic rocks, usually schistose, and some well-marked layers of ferruginous quartz rocks.

Granite exists in large irruptive masses, which have broken up and penetrated the older gneisses and schists. The gneisses so largely developed in Mysore are for the most part rocks of granitic composition, having a parallel-banded, wavy, or whorl-like structure, due to the arrangement of the lighter and darker constituents in more or less distinct bands or streaks. They appear to be of igneous origin, rather than metamorphosed sedimentary rocks as suggested by Mr. Bruce Foote, the banding being due partly to segregation

[1] See *Mysore Geological Department Records*, vol. iii, plate 1; vol. ii, p. 82; vol. iii, p. 113.

of the more basic constituents, and partly to the contemporaneous or subsequent veining by pegmatite, aplite, and other forms of granitic material. The prevailing type is a biotite-gneiss.

The Malnād or eastern face of the Western Ghāts is clothed with magnificent timber and contains the richest flora. The summits of the mountains are bare of trees, but covered with grasses and herbs—*Anthisteria*, *Andropogon*, *Habenaria*, &c. The valleys descending from them are filled with woods called *sholas*, leaving grass-covered ridges between. Above 4,500 feet is the evergreen belt; lower down, to 3,000 feet, is a mixed belt, practically continuous; and finally the deciduous trees are at the foot and throughout the plains. At extreme heights occur trees of the Nīlgiri flora, but smaller. The South Indian tree-fern often ascends into the highest *sholas*, but rarer ferns abound in the mixed zone. It is here that coffee (*Coffea arabica*), pepper (*Piper nigrum*), and cardamoms (*Elettaria cardamomum*) are cultivated. *Calophyllum tomentosum*, *Hardwickia binata*, *Bombax malabaricum*, *Vateria indica*, *Mesua ferrea*, *Myristica laurifolia*, *M. magnifica*, *Lagerstroemia lanceolata*, *L. Flos Reginae*, *Michelia Champaca*, *Ficus* of many species, and *Tectona grandis* are some of the prominent trees in this belt, with the prickly bamboo (*Bambusa arundinacea*). The Maidān or open plateau contains numerous species not found in the upper hill region. *Bassia latifolia*, *Pterocarpus santalinus*, *Tamarindus indicus*, *Feronia elephantum*, *Mangifera indica*, *Artocarpus integrifolia*, *Acacia arabica*, *Pongamia glabra*, *Santalum album*, *Phoenix sylvestris*, and *Cocos nucifera* are some of those characteristic of this part. The hill ranges here and extensive areas in the plains are covered with small trees, shrubs, and twiners of various species, forming what is called scrub jungle. The main roads are lined with avenues of indigenous trees and the railroads with hedges of the aloe (*Agave americana*). Most villages have a grove (called a 'tope') of common trees.

Elephants range through the southern forests and are also found in Shimoga District. A special Khedda department for their capture and training was formed in 1873, but was in abeyance from the famine of 1876 until 1889, when it was again in operation till 1898. Tigers, leopards, and bears are numerous. Bison are found in the western and southern forests. Various kinds of antelope and deer, wild hog, wolf, and wild dog are met with in different parts. Monkeys abound, and the southern *langūr* frequents the western woods. Otters and pangolins may also be mentioned. Among birds, peafowl are common in the west; pelicans are also found, with numerous game-birds. Jays, parrots, kingfishers, orioles, and other birds of gay plumage are common. So are vultures, with many kinds of kites, hawks, and crows, as well as owls of various kinds. Of reptiles, the hamadryad is met with in remote and dense forests. Cobras, pythons, the *karait*, the rat snake

or *dhāmin*, the green snake, and others are general in all parts. Iguanas and chameleons may often be seen, while large lizards called 'blood-suckers' are universal. Crocodiles abound in most of the western rivers, where mahseer and other large fish are also to be found. Of insects, leeches are common in the forests in the wet season, and are very troublesome. The lac insect propagates on the *jālāri* tree. Bees of many kinds are common. A small fly, not bigger than a flea, called the eye-fly or mango-fly, is quite a pest, especially in the mango season, and spreads ophthalmia. Mosquitoes are universal, and white ants or termites insatiable in their ravages. There is a great variety of mantis, some of which simulate straws or leaves.

The year in Mysore may be divided into three seasons: the rainy, the cold, and the hot. The first commences with the bursting of the south-west monsoon, generally early in June, and continues, with some interval in August and September, to the middle of November, closing with the heavy rains of what is popularly called the north-east monsoon. It is followed by the cold season, which is generally entirely free from rain, and lasts till the end of February. The hot season then sets in during March, and increases in intensity to the end of May, with occasional relief from thunderstorms. The temperature is most agreeable during the rainy months, the range of the thermometer at Bangalore at that season being between 64° and 84°. In the cold season the mercury falls there as low as 51° in the early morning, and sometimes rises to 80° during the day. The minimum and maximum in the shade during the hottest months are about 66° and 91°, or in extreme seasons 96°.

The annual rainfall ranges from over 360 inches on the crest of the Western Ghāts to as little as 19 inches in the north centre. But these are extremes that apply only to limited areas. The excessive rain of the Malnād rapidly diminishes eastwards, and from 20 to 37 inches may be accepted as the general annual average for the greater part of the State[1]. The zone of heavy rain, 60 inches and over, is confined to the Western Ghāt region from Sorab to Manjarābād. From 40 to 60 inches of rain fall between Sorab and Shikārpur, in the Bābā Budans region, and in Heggadadevankote. The zone of 25 to 40 inches extends over all the remainder of the State, except Chitaldroog District, the north of Tumkūr and Kolār Districts, and the extreme south-east of Mysore District, which have less than 25 inches. The distribution closely follows that of the forest belts, the heaviest rain coinciding with the evergreen belt, the next with the deciduous forest, and the least rainy tracts with the dry belt.

[1] The mean annual relative humidity of the Mysore State is set down by Mr. H. F. Blanford as 66, that of Malabar and Coorg being 79, and of the Carnatic 67. (*Climates and Weather of India.*)

The cold-season rains, December to March, are insignificant, scanty, and not much needed for the standing crops. But they are useful in keeping up the pasture supply. The hot-season rains, in April and May, sometimes called mango showers, are of the accidental kind, and give heavy short storms from the east. They are very important for agriculture, as a copious fall replenishes the tanks, and enables the cultivators to prepare the land for the ensuing monsoon. The south-west monsoon from June to September is perhaps the most essential for the country, which requires the steady drizzling rains of this season to make the soil productive. The north-east monsoon in October and November is essentially important for filling the tanks, and providing a store of water that may last over the rainless months.

A Meteorological department was formed in 1893, with observatories at Bangalore, Mysore, Hassan, and Chitaldroog, and having under its direction 203 rain-gauge stations. The following table shows the average temperature and rainfall recorded at Bangalore, Mysore, and Chitaldroog for a period of years prior to 1901:—

Station.	Height of Observatory above sea-level in feet.	Average temperature (in degrees Fahrenheit) for the twenty-five years ending 1901 in							
		January.		May.		July.		November.	
		Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.
Bangalore * .	3,021	68·8	23·3	80·4	22·2	74·2	16·3	70·8	17·3
Mysore † . .	2,518	72·5	24·5	80·9	22·6	75·0	15·9	73·3	18·4
Chitaldroog ‡ .	2,405	73·5	22·9	82·7	22·9	75·3	13·6	73·5	18·3

NOTE.—The diurnal range is the average difference between the maximum and minimum temperatures of each day.

* The figures for January are for twenty-four years and the others for twenty-five.

† The figures for January are for eight years and the others for nine.

‡ The figures are for nine years.

Station.	Average rainfall (in inches) for the twenty-five years ending 1901 in												
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total of year.
Bangalore .	0·12	0·20	0·45	1·31	4·29	2 97	3·91	5·02	6·82	6·34	3·13	0·49	35·05
Mysore .	0·07	0·20	0·66	2·60	5·57	2·57	2·36	3·12	4·85	7·81	2·33	0·47	32·61
Chitaldroog	0·17	0·04	0·27	1·47	3·22	2·77	2·70	2·77	4·05	4·26	2·78	0·33	24·83

History.

The authentic history of Mysore, like that of India in general, begins after the invasion by Alexander the Great in 327 B.C., and has been gathered from the inscriptions, several thousands in number, scattered all over the country[1]. On the retirement of Alexander, the north of India came under the dominion of Chandra Gupta, the first of the Maurya emperors, with his capital

[1] These have been published by Mr. L. Rice, C.I.E., the Mysore Director of Archaeology, in a series called *Epigraphia Carnatica*, numbering twelve volumes.

at Pātaliputra (Patna on the Ganges). According to the Jain traditions, supported by inscriptions and monuments, Chandra Gupta ended his days at Sravana Belgola in Mysore. In accordance with the dictates of the Jain religion, he gave up his throne in order to close his life in religious exercises, and accompanied the great teacher Bhadrabāhu on the migration which he led to the South from Ujjain, at the beginning of a twelve years' famine which he had predicted. When they reached Sravana Belgola, Bhadrabāhu felt his end approaching, and sent on the body of pilgrims under Visākha to the Punnāta country, the south-western portion of Mysore, he himself remaining behind, tended by a single disciple, who was no other than Chandra Gupta. There he died, and Chandra Gupta also, after surviving his teacher twelve years. Whatever truth there may be in this story, the discovery by Mr. Rice of edicts of Asoka in the north-east of the Mysore country has put it beyond doubt that that portion of the State formed part of the Maurya empire. Asoka also sent missionaries, among other places, to Mahisa-mandala (Mysore) and Vanavāsi (Banavāsi, north-west of the State). These were probably just beyond the limits of his empire.

The north of Mysore next came under the rule of the Andhra or Sātavāhana dynasty. From the latter name is derived the form Sālivāhana, applied to an era, dating from A.D. 78, which is in common use. Their period extends from the second century B.C. to the second century A.D., and their dominions stretched from east to west over the entire Deccan. Their chief capital was Dhanakataka (Dhāranikotta on the Kistna), but they had a western capital at Paithan on the Godāvari. The kings who ruled in Mysore bore the general name Sātakarni.

The Andhras were succeeded by the Kadambas on the north-west, and by the Pallavas in the north-east. The former were of indigenous origin, their birthplace being Sthānagundūr (Tālagunda in the Shikārpur *tāluk*). Banavāsi was their capital, and Shimoga District a part of their kingdom. The Pallavas had Kānchi (Conjeeveram) as their capital, and Tundāka or Tonda-mandala (the Madras country east of Mysore) as their territory, and displaced the Mahāvalis or Bānas, claiming descent from Bali or Mahā Bali, apparently connected with Mahābalipur (the SEVEN PAGODAS, on the Madras coast). From the ninth century the Pallavas are also called Nonambas or Nolambas, and gave their name to Nonambavādi or Nolambavādi (Chitaldroog District), the inhabitants of which are represented by the existing Nonabas.

Meanwhile two Ganga princes from the north, of the Ikshvāku and therefore Solar race, named Dadiga and Mādhava, aided by the Jain priest Simhanandi, whom they met at Perūr (still called Ganga-Perūr, in Cuddapah), established themselves towards the close of the second

century throughout the remaining parts of the Mysore country, with Kuvalāla or Kolāla (Kolār) as their chief city, and Nandagiri (Nandidroog) as their stronghold, founding the Gangavādi kingdom, whose inhabitants survive in the existing Gangadikāras. The name of this dynasty, which ruled in Mysore till the opening of the eleventh century, connects them with the Gangas or Gangaridae, the people of the Ganges valley, who according to Greek and Roman writers were the chief subjects of Chandra Gupta. The Gangas also founded dynasties in Kalinga (Orissa and adjacent parts), and are mentioned by Pliny as Gangaridae Calingae. It was remorse for the slaughter and devastation that attended his conquest of Kalinga which led Asoka to devote himself to peace and religion, as stated in his thirteenth Rock Edict. The boundaries of Gangavādi are given as: north, Marandale (not identified); east, Tonda-nād; west, the ocean in the direction of Chera (Cochin and Travancore); south, Kongu (Salem and Coimbatore). All the kings had the cognomen Kongunivarma. The third king removed his capital to Talakād on the Cauvery. The seventh king, Durvinīta, made extensive conquests in the south and east, capturing some of the Pallava possessions. In the middle of the eighth century the Ganga dominion was in a high state of prosperity, and was designated the Srīrājya or 'fortunate kingdom.' The king Srīpurusha subdued the Pallavas and took from them the title of Permmanadi, always applied to the subsequent Ganga kings. He fixed the royal residence at Mānyapura (Manne in Bangalore District).

To revert to the north-west of the country. In the fifth century the Chālukyas, claiming to come from Ajodhyā, appeared in the Deccan and overcame the Rāshtrakūtas, but were stopped by the Pallavas. In the sixth century the Chālukya king Pulikesin wrested Vātāpi (Bādāmi in Bijāpur District) from the Pallavas and made it his capital. His son subdued the Mauryas ruling in the Konkan, and the Kadambas of Banavāsi. Another son conquered the Kalachuris also. Pulikesin II, in the seventh century, came into contact with the Gangas. About 617 the Chālukyas separated into two branches. The Eastern Chālukyas made Vengi (in Kistna District), taken from the Pallavas, and subsequently Rājahmundry, their capital, while the Western Chālukyas continued to rule from Vātāpi, and eventually from Kalyāni (in the Nizām's Dominions). These are styled the Satyāsraya family, from a name of Pulikesin, the first king of this branch, who was a great conqueror. His chief victory was over Harshavardhana, king of Kanauj, the most powerful monarch in Northern India. By this conquest he gained the title of Paramesvara. Both kings are described by the Chinese pilgrim Hiuen Tsiang. Pulikesin exchanged presents with Khusrū II of Persia. After his death the Pallavas inflicted severe losses on the Western Chālukyas, but Vikramāditya

restored their power. He subdued the Pāndya, Chola, Kerala, and Kalabhra kings, and captured Kānchi, forcing the Pallava king, who had never bowed to any man, to place his crown at his feet. The three next kings followed up these victories, until all the powers from the Guptas on the Ganges to the southernmost rulers of Ceylon had submitted to them.

But the Rāshtrakūtas, under their kings Dantidurga and Krishna or Kannara, now succeeded in freeing themselves, and for 200 years from the middle of the eighth century became supreme. They were also called Rattas, and their territory Rattavādi. Their capital, at first Mayūrakhandi (Morkhand in Nasik District), was early in the ninth century at Mānyakheta (Mālkhed in the Nizām's Dominions). They commonly bore the title Vallabha, taken from the Chālukyas, which, in its Prākrit form Ballaha, led to their being called Balharās by Arab travellers of the tenth century. At the end of the eighth century Dhruva or Dhārāvarsha made the Pallava king pay tribute, and defeated and imprisoned the king of the Gangas, who had never been conquered before. During the interregnum thus caused, Rāshtrakūta viceroys governed the Ganga territories, of whom inscriptions tell us of Kambharasa, surnamed Ranāvaloka, apparently a son of Dhārāvarsha, and in 813 Chāki Rājā. Eventually the Rāshtrakūta king Govinda or Prabhūtavarsha released the Ganga king, probably Sivamāra, and replaced him on the throne. Nripatunga or Amoghavarsha had a very long reign during the ninth century, and has left writings in the Kanarese language which show his great interest in the people and country of Karnātaka [1]. His successor was engaged in constant wars with the Eastern Chālukyas. These were subdued in the middle of the tenth century by the Cholas, who thus came into collision with the Rāshtrakūtas, then in intimate alliance with the Gangas. Būtuga of the latter family had married a Rāshtrakūta princess, and helped his brother-in-law Kannara or Akālavarsha to secure the throne. He now rendered him a great service by slaying Rājāditya, the Chola king, at Takkola (near Arkonam). This put a stop to the Chola invasion; and Būtuga was rewarded with the north-western districts of Mysore, in addition to those in the Bombay country which formed the dowry of his bride. In 973 Taila restored the supremacy of the Western Chālukyas, and Indra, the last of the Rāshtrakūtas, died at Sravana Belgola in 982.

From the time of Rāchamalla, about 820, the Gangas had again prospered, and all the kings to the end take the title Satyavākya in addition to Permmanadi. Rāchamalla was followed by Nītimārga, and he by Satyavākya and Ereyappa. Then came Būtuga, already mentioned. His successor, Mārasimha, utterly destroyed the Nolambas.

[1] A small Sanskrit work by him on morality was translated into Tibetan.

With Rakkasa Ganga and a Nītimārga or Ganga Rājā the dynasty came to an end, in the manner related below.

The revival of the Western Chālukya power continued for 200 years, during the first half of which they were engaged in continual wars with the Cholas. The latter had from 972 completely subjugated the Eastern Chālukyas of Vengi, whose kingdom was eventually made an apanage of the Chola empire, being ruled by Chola princes as viceroys. At the same time a Chola princess was married to the Kalinga Ganga king still farther north. In 997 the Cholas under Rājārājā had invaded Mysore in the east. In 1004 they reappeared in overwhelming force, under his son Rājendra Chola, took Talakād, and subverted the Ganga sovereignty, capturing all the south and east of the country, up to a line from about Arkalgud through Seringapatam and Nelamangala to Nidugal.

The remaining portions of Mysore, that is, the north and west, were subject to the Western Chālukyas, of whom the most celebrated was Vikramāditya, the son of a Ganga mother, who ruled from 1076 to 1126. Their empire is generally called Kuntala, of which the Banavāse-nād, or Shimoga District, was a principal province. The capital of this was Balligāve, now Belgāmi in the Shikārpur *tāluk*, which contained splendid temples, dedicated to Jina, Buddha, Vishnu, Siva, and Brahmā. Famous scholars were at the head of its five *maths*, where, as in the mediaeval monasteries of Europe, food and medicine were dispensed to all comers.

The Chālukyas were supplanted in 1155 by the Kalachuris in the person of Bijjala, who had been their minister and general. During his time took place the Saiva revival which resulted in the establishment of the Lingāyat creed, still the popular religion of the Kanarese-speaking countries. The Kalachuri power lasted but a short time, till about 1183.

The local dynasty which rose to dominion in Mysore on the overthrow of the Gangas was that of the Poysalas or Hoysalas, by origin a line of chiefs in the Western Ghāts. Their birthplace was Sosevūr or Sasikapura (now Angadi in Kadūr District). The founder was Sala, who at the exclamation *poy Sala* (strike, Sala!) by a Jain priest slew the tiger that was threatening him, and thence took the name Poysala (of which Hoysala is the modern form), the priest aiding him in establishing a kingdom. The Hoysalas claimed to be Yādavas and therefore of the Lunar race. At first they recognized the Western Chālukyas as overlords. Their capital was fixed at Dorasamudra (now Halebīd in Hassan District). In the time of Vinayāditya, who ruled to the end of the eleventh century, the kingdom included Konkana, Alvakheda (South Kanara), Bayalnād (Wynaad), Talakād (the south of Mysore District), and Sāvimale (somewhere north towards the Kistna).

His son Ereyanga was a great general under the Chālukyas, and among other exploits burnt Dhār, the Mālava capital. He died before his father, and the throne passed to his sons. Of these, Bitti Deva, who ruled from 1104 to 1141, was the most distinguished. Under the influence of the reformer Rāmānuja, who had taken refuge in his kingdom from Chola persecution, he exchanged the Jain faith for that of Vishnu, and took the name of Vishnuvardhana. He also entered upon an extensive range of conquests, an early achievement being the capture of Talakād about 1116. This was followed by the expulsion from Mysore of the Cholas. The boundaries of the kingdom in his reign were extended to the lower *ghāt* of Nangali (Kolār District) on the east; Kongu, Cheram, and Anaimalia (Salem and Coimbatore) on the south; the Bārkanūr *ghāt* road of Konkana on the west; and Sāvimale on the north. Rāmeswaram is also given as a boundary on the south. His own country he gave to the Brāhmans, while he ruled over countries won by his sword. He died at Bankāpur (in Dhārwār District) and was succeeded by his son Nārasimha. His grandson, Vīra Ballāla, who came to the throne in 1173, gained such renown that the kings of this family are sometimes called the Ballālas. He won important victories to the north over the Kalachuris and the Seunas (or Yādavas of Deogiri), especially one at Soratūr, and carried the Hoysala kingdom up to and beyond the Peddore or Kistna, taking up his residence at Lokkigundi (Lakkundi in Dhārwār). He reduced all the hill forts about the Tungabhadra; and, capturing Uchchangi, which the Cholas, after besieging for twelve years, had abandoned as hopeless, he brought into subjection the Pāndyas of that place. His son, Nārasimha II, repulsed the Seunas in the north-west, but was mostly engaged in wars to the south-east, where he overthrew the Pāndya, subdued the Kādava (or Pallava) and Magara kings, and rescued the Chola leader, reseating him on his throne. The Seunas took this opportunity to press southwards, and succeeded in settling in parts of the north-west. Someswara next came to the throne in 1233; and in his time the Seunas attempted to advance as far as Dorasamudra, the capital, but were driven back, though their general, Sāluva Tikkama, claimed some success. The Hoysala king, however, went to live in the Chola country, at Kannanūr or Vikramapura (near Srīrangam and Trichinopoly). On his death in 1254 a partition was made of the Hoysala territories, the capital and the ancestral Kannada kingdom going to his son Nārasimha III, while the Tamil provinces and Kolār District were given to another son, Rāmanātha. The Seunas, under their king Mahādeva, were again put to flight by Nārasimha. The kingdom was then once more united under Ballāla III, who came to the throne in 1291. During his reign the Musalmāns invaded the country in

Chingleput, another nominal capital, being taken by the forces of Golconda, the king fled to the protection of Sivappa Naik of Bednūr (Shimoga District), who installed him at Sakkarepatna and neighbouring places, and attempted to besiege Seringapatam under pretence of restoring him. But with him the empire ended. A member of the family established himself at Anegundi, on the opposite side of the river to Vijayanagar; and his line continued till 1776, when Tipū Sultān overran the whole country, dispossessed the reigning chief, and burnt Anegundi. Some survivors of the family are still there.

During the fifteenth and sixteenth centuries the Vijayanagar kings had bestowed on, or confirmed to, vassal chiefs, bearing various titles, sundry tracts in Mysore, on the condition of paying tribute and rendering military service. Those in the north were controlled direct from the capital. The southern chiefs were under a viceroy, termed the Srī Ranga Rāyal, at Seringapatam. After the disaster of Tālikotā, although a nominal allegiance continued to be paid to the viceroy, such of the chiefs as had the power gradually declared their independence. Among these were the Naiks of Keladi or Bednūr, Basavāpatna, and Chitaldroog in the north; the Naiks of Belūr in the west; the Naiks of Hāgalvādi, and the Gaudas of Yelahanka and Ballāpur, in the centre; the Gauda of Sugatūr in the east; the Changālvas, and the Wodeyars of Mysore, Kalale, Ummattūr, and others, in the south. These *poligārs*[1], as they were called, will be noticed in connexion with their respective Districts.

Bijāpur and Golconda entered into a mutual agreement in 1573 to extend their conquests in such directions as not to interfere with one another. The Bijāpur line was to the south. Adoni having been captured, and the West Coast regions overrun, an attempt was made in 1577 on Penukonda. But it found a gallant defender, as before stated, in Jagadeva Rāya, who forced the Bijāpur army to retire. For this brilliant service, his territory of Bāramahāl was extended across Mysore to the Western Ghāts, and he made Channapatna his capital. At about the same period Tamme Gauda of Sugatūr rendered some important service, for which he received the title of Chikka Rāya, with a grant of territory from Hoskote in the west to Punganūr in the east. Meanwhile the Wodeyars of Mysore had been absorbing all the lesser States to their south, till in 1610 they secured Seringapatam, ousting the effete viceroy. In 1613 they took Ummattūr, in 1630 Channapatna, and in 1644 uprooted the Changālvas in Piriyāpatna, thus becoming the dominant power in the south of the country.

But in the north and east an invasion by Bijāpur in 1636 was successful. After the appointment of Aurangzeb as viceroy of the Deccan, Bijāpur became tributary to Delhi. Its arms were then directed to the

[1] Properly *pālayagāra*, the holder of a *pālaya* or baronial estate.

south, under Randullah Khān, accompanied by Shāhjī, father of the famous Sivajī, as second in command, with the promise of a *jāgīr* in the territories to be conquered. The Bednūr kingdom was now overrun, and the chief besieged in Kavaledurga, but he bought off the enemy. An attempt on Seringapatam was repulsed with great slaughter by Kanthīrava, the Mysore Rājā. The invaders then captured Bangalore and Kolār District in 1639, and, descending the Ghāts, took Vellore and Gingee. On returning to the table-land, Dod-Ballāpur, Sīra, and the south of Chitaldroog District fell into their hands by 1644. A province named Carnatic-Bijāpur-Bālāghāt was now formed, including Kolār, Hoskote, Bangalore, and Sīra. This was bestowed as a *jāgīr* on Shāhjī, who was also governor of the conquered territory below the Ghats, called Carnatic-Bijāpur-Pāyanghāt. Under him a large Marāthā element was introduced into Mysore. Shāhjī died in 1664, and his son Venkojī or Ekojī, who lived at Tanjore, inherited his father's possessions. But Sivajī, the only surviving son of the first marriage, resolved to claim a half-share. To enforce this he overran the Carnatic provinces above and below the Ghāts in 1677, and in the end Venkojī was induced to agree to a partition, by which he retained Tanjore.

In 1684 the Mughal arms, under Aurangzeb, were once more directed to the Deccan for the purpose of crushing the Marāthās, and subjugating the Muhammadan States of Bijāpur and Golconda. Bijāpur was taken in 1686, Golconda in 1687. Flying columns were sent out after each of these captures to secure the dependent districts south of the Tunga-bhadra. A new province was thus formed in 1687, with Sīra (Tumkūr District) as the capital. It was composed of the seven *parganas* of Basavāpatna, Būdihāl, Sīra, Penukonda, Dod-Ballāpur, Hoskote, and Kolār; and it had, as tributary States, Harpanahalli, Kondarpi, Anegundi, Bednūr, Chitaldroog, and Mysore. Bangalore was sold to the Rājā of Mysore for 3 lakhs of rupees, the sum he had agreed to give for it to Venkojī, who finding it too far off to control had offered it for sale. Kāsim Khān, with the designation of Faujdār Dīwān, was the first governor of this province of Sīra. It continued a Mughal possession till 1757.

We must now retrace our steps, to relate the history of the Mysore family. Their origin is ascribed to two Kshattriya princes of the Yādava race, named Vijaya and Krishna, who came to the South from Dwārka in Kāthiāwār in 1399, and, being pleased with the country, took up their abode in Mahishur or Mysore, the chief town. Here they heard that the Wodeyar or chief of Hadinādu, a few miles to the south-east, had wandered away, being out of his mind, and that the neighbouring chief of Kārugahalli, who was of inferior caste, taking advantage of the defenceless condition of the family, had demanded the only daughter of the house in marriage. To this a consent had

been given under compulsion, and arrangements unwillingly made for the ceremony. The two brothers vowed to espouse the cause of the distressed maiden, and, having secreted themselves with some followers, fell upon the chief and his retinue while seated at the banquet and slew him. Marching at once on Kārugahalli, they surprised it and returned in triumph to Hadinādu, where the girl became the willing bride of Vijaya, who took the title of Odeyar or Wodeyar, and assumed the government of Hadinādu and Kārugahalli, with a profession of the religion of the Jangama or Lingāyats. The fourth king, Chāma Rājā III, who reigned from 1513 to 1552, made a partition of his dominions between his three sons. To Chāma Rājā IV, surnamed Bol or 'bald,' he gave Mysore, and, no male heir surviving to either of the other brothers, the succession was continued in the junior or Mysore branch.

It was in the time of Chāma Rājā IV that the fatal disaster of Tālikotā befell the Vijayanagar empire, and the authority of its viceroy at Seringapatam was in consequence impaired. Accordingly Chāma Rājā evaded payment of tribute, while the imbecile viceroy attempted in vain to arrest him. When, after the short reign of his elder brother, Rājā Wodeyar was raised to the throne by the elders, the fortunes of the royal family became established. He contrived in 1610 to gain possession of Seringapatam, ousting the aged viceroy Tirumala Rājā, who retired to Talakād. In 1613 Rājā Wodeyar subdued Ummattūr and annexed its possessions to Mysore. He also made some acquisitions northwards from Jagadeva Rāya's territories. His policy was to suppress the Wodeyars or local chiefs and to conciliate the ryots. He was followed by his grandson Chāma Rājā VI, who pursued the same policy, and by the capture in 1630 of Channapatna absorbed into Mysore all the possessions of Jagadeva Rāya.

Of the succeeding kings, Kanthīrava Narasa Rājā was distinguished. The year after his accession in 1638 he had to defend Seringapatam against the Bijāpur forces, and, as already related, drove them off with great slaughter. He extended the kingdom on all sides, taking Satyamangalam and other places from the Naik of Madura southwards; overthrowing the Changālvas in the west, thus gaining Piriyāpatna and Arkalgud; capturing Hosūr (now in Salem) to the north; and inflicting a severe defeat at Yelahanka on Kempe Gauda of Māgadi, who was forced to pay a heavy contribution. He added to and strengthened the fortifications of Seringapatam, assumed more of royal state at his court, and was the first to establish a mint, where were coined the Kanthirāya (Canteroy) *huns* and *fanams* named after him, which continued to be the current national money of Mysore until the Muhammadan usurpation. He died without issue, and of two claimants to the throne, Dodda Deva Rājā, grandson of Bol Chāma Rājā, was selected. It was

during his reign that Srī Ranga Rāya, the last representative of Vijayanagar, fled for refuge to Bednūr. Sivappa Naik, the head of that State, on the plea of restoring the royal line, appeared before Seringapatam with a large force. But he was compelled to retreat, and the Mysore armies overran the tracts in the west which he had conferred on Srī Ranga Rāya. The Naik of Madura now invaded Mysore, but was also forced to retire, while Mysore troops, capturing Erode and Dhārāpuram, levied contributions from Trichinopoly and other chief places. Dodda Deva was a great friend of the Brāhmans, and profuse in his donations to them. He died at Chiknāyakanhalli, then the northern boundary of the State, the southern being Dhārāpuram in Coimbatore. The western and eastern boundaries were Sakkarepatna and Salem. Chikka Deva Rājā, previously passed over, now came to the throne, and proved to be one of the most distinguished of his line. When a youth at Yelandūr he had formed a friendship with a Jain *pandit*, who was now made the minister, though obnoxious on account of his faith. A regular postal system was for the first time established, which was also utilized for detective purposes. Maddagiri and other places to the north were conquered, making Mysore conterminous with Carnatic-Bijāpur-Bālāghāt, then disorganized by the raids of Sivajī. For ten years following a variety of vexatious petty taxes were imposed, in order to increase the revenue without incurring the odium of enhancing the fixed land tax. Great discontent ensued, fanned by the Jangama priests. The ryots refused to till the land, and, deserting their villages, assembled as if to emigrate. The king resolved upon a treacherous massacre of the Jangama priests, and this sanguinary measure stopped all opposition to the new financial system, but the minister was assassinated as being the instigator of the innovations. With his dying breath he recommended as his successor a Brāhman named Tirumalārya, one of the most learned and eminent ministers of Mysore.

This brings us to 1687, when the Mughals, having captured Bijāpur, were forming the province of Sīra. Venkojī had agreed, as before related, to sell Bangalore to the Mysore Rājā for 3 lakhs of rupees. But Kāsim Khān, the Mughal general, first seized it and then carried out the bargain, pocketing the money himself. Through him the Rājā assiduously cultivated an alliance with Aurangzeb, and meanwhile subdued such parts of the country as would not interfere with the Mughal operations. A great part of Bāramahāl and Salem below the Ghāts was thus added to Mysore, and by 1694 all the west up to the Bābā Budan mountains. In 1696 the territory of the Naik of Madura was invaded and Trichinopoly besieged. In the absence of the main army, a Marāthā force marching to the relief of Gingee suddenly appeared before Seringapatam, attracted by the hope of plunder. The Mysore army, recalled by express, returned by forced

marches, and by a skilful stratagem totally defeated the enemy, who lost everything. Kāsim Khān now died; and the king, in order to establish fresh interest at court and obtain if possible recognition of his new conquests, sent an embassy to the emperor at Ahmadnagar, which returned in 1700 with a new signet, bearing the title Jug Deo Rāj, and permission to sit on an ivory throne. The king now formed the administration into eighteen departments, in imitation of what the envoys had seen at the Mughal court. He died in 1704, at the age of seventy-six, having accumulated a large treasure, and, notwithstanding the troublous times, established a secure and prosperous State, extending from Palni and Anaimalai in the south to Midagesi in the north, and from Carnatic Garh in Bāramahāl in the east to Coorg and Balam in the west.

In the reign of Dodda Krishna Rājā (1713-31) the Nawāb of Sīra's jurisdiction was restricted to the Bālāghāt, a separate Nawāb of Arcot being appointed to the Pāyanghāt. The ascendancy of the throne in Mysore began to decline, and all power fell into the hands of the ministers, Devarāj and Nanjarāj[1]. At frequent intervals armies sent by the rival Nawābs or by the Sūbahdār of the Deccan appeared, claiming contributions, and, if they could not be driven away, had to be bought off. When at length the Marāthās appeared in 1757 under Bālājī Rao, so impoverished had the State become that several *tāluks* were pledged to them as security to induce them to retire.

Meanwhile, at the siege in 1749 of Devanhalli, then a frontier fortress, a volunteer horseman had come to notice who was destined before long to gain the supreme power in the State and to play no mean part in the history of India. This was Haidar Alī, whose courage in the field induced Nanjarāj to give him a command. He managed to increase his force; and amid the struggles between rival candidates for the Nawābship of the Carnatic, supported by the English and French respectively, he secured for himself valuable booty. His services before Trichinopoly led to his appointment as Faujdār of Dindigul (Madura District), where he added to his force and enriched himself by wholesale plunder. The army at the capital having become mutinous on account of their pay being in arrears, Haidar was sent for to settle the disputes, which he did with unscrupulous ability. The fort and district of Bangalore were now given to him as a *jāgīr*. On his advice the Marāthās had been expelled from the pledged *tāluks* when the rains set in and farther invasion was at the time impossible. They appeared again in 1759 in great force

[1] There were two of this name. The first Nanjarāj was a cousin of Devarāj, who on his deathbed, in 1740, refunded 8 lakhs of rupees, estimated as the amount he had improperly acquired. He was succeeded by the second Nanjarāj, a younger brother of Devarāj.

under Gopāl Hari. Haidar was appointed to the chief command to oppose them, and by his skill rescued Bangalore and Channapatna, whereupon the Marāthās, finding themselves outdone, agreed to leave the country on payment of a certain sum in discharge of all claims. Returning in triumph to Seringapatam, he was received in a splendid *darbār*, where Nanjarāj rose up to embrace him, and he was saluted with the title Fateh Haidar Bahādur. The pay of the troops before long again fell into arrears, and again Haidar had to satisfy them, for which purpose more than half the country was placed in his hands, while Nanjarāj was forcibly retired.

In 1760 the French commander Count de Lally, cooped up by the English in Pondicherry, sought the aid of Haidar, and a treaty was made. When his troops had gone away on this expedition, Khande Rao, his coadjutor in all his schemes hitherto, turned against him and induced the Rājā's party to try to get rid of him. A cannonade was suddenly opened on his camp near Seringapatam, and he was forced to flee for his life. Bangalore was gained just in time. Collecting his scattered forces, assisted by some French, he marched against Khande Rao, by whom he was defeated near Nanjangūd. All now seemed lost, but he repaired secretly to Nanjarāj and persuaded him to resume his authority. Armed with this, he contrived a stratagem by which Khande Rao was completely deceived, and fled under the impression that he was betrayed, leaving all his forces to go over to Haidar. The latter reconquered the southern districts and returned to Seringapatam at the head of a great army, with which, again by stratagem, he got possession of the island. The Rājā was now at his mercy; Khande Rao was given up, and Haidar's usurpation was inevitable, though he always maintained a royal occupant on the throne.

Haidar soon subdued all the petty States to the east and north of the country, and marched against Bednūr, which was taken in March, 1763, and a booty valued at twelve millions sterling fell into his hands, together with the countries on the West Coast. This conquest was always spoken of by him as the foundation of his subsequent greatness. He conceived the idea of making a new capital for himself here, and gave it the name of Haidarnagar (now Nagar). He established a mint, from which coins in his own name were issued, and formed a dockyard and naval arsenal on the coast. But he had to reckon with the Marāthās and the Nizām, who laid claim to some of the countries he had conquered. He was defeated by the former at Rattihalli, but contrived by negotiations to retrieve his fortunes with both powers. When, before long, they again planned a joint invasion of Mysore, he bought off the Marāthās and induced the Nizām to join with himself against the British. These he attacked

in 1767, but they forced the Nizām to break off the alliance, and in 1769 peace was concluded with Haidar. It is impossible here to follow in detail all the operations and varying fortunes of the wars which Haidar, supported by the French, waged against the British. His last invasion of the British territories was in July, 1780, and while the war was in progress he died in camp near Arcot on December 7, 1782, at the age of sixty. An unlettered adventurer, he had raised himself to a throne and founded a kingdom.

His son and successor, Tipū, had not the ability of his father; his mind was warped by a fanatical bigotry, and he bore the most inveterate hatred against the British. The war with them was prolonged until 1784, when a treaty of peace was concluded, followed by a successful war with the Marāthās and the Nizām. Expeditions to the West Coast followed, in which the most cruel persecutions befell the inhabitants. The only country there which Tipū had not subdued was Travancore, which was under the protection of the British. But at the end of 1789 he invaded it, and the British at once prepared for war, having the Marāthās and the Nizām as allies. Lord Cornwallis, the Governor-General, himself took command of the army. After capturing Bangalore and many of the strongest hill forts around, he besieged Seringapatam with such vigour that, in February, 1792, Tipū was driven to accept the terms offered him: namely, the surrender of half his territories, the payment of 3 crores and 30 lakhs of rupees, and the delivery of two of his sons as hostages. With his misfortunes the Sultan's caprice, fanaticism, and spirit of innovation were carried to the verge of insanity. He began to alter everything in the country. The name of every object was changed—of cycles, years, and months; of weights, measures, and coins; of forts and towns; of offices, military and civil; the official designation of all persons and things: a strange parody of what was happening in France, of which he had probably heard something. Exports and imports were prohibited, in order to protect domestic trade; the growth of poppy for opium was stopped, and all liquor shops abolished, to prevent intoxication. Grants to Hindu temples and the *ināms* of *pātels* were confiscated. The fine old irrigation works were to be destroyed and reconstructed in his own name. His evident aim was to obliterate every trace of previous rulers, and to introduce a new order of things beginning with himself. On the death in 1796 of the pageant Rājā, no successor was appointed, and the royal family were turned out of the palace, stripped of all.

Tipū next strained every nerve to form a coalition for the expulsion of the British from India. Embassies were sent to Constantinople and Kābul; letters to Arabia, Persia, and Maskat; agents to Delhi, Oudh, Hyderābād, and Poona; proposals to Jodhpur, Jaipur, and Kashmīr. The French in particular were repeatedly applied to,

and Bonaparte's invasion of Egypt encouraged the hope of immediate aid, while overtures were made by him to Tipū. But Nelson's great victory at the Nile soon put an end to Bonaparte's designs on the East. Lord Mornington, the Governor-General, had called on the Sultān for an explanation of his proceedings, and, receiving evasive answers, resolved on war. The Nizām was again allied with the British, but the Marāthās stood aloof. General Harris, in command of the grand army, having defeated Tipū at Malavalli, sat down before Seringapatam on April 5. The Sultān opened negotiations; but the time having passed away without his accepting the terms offered, the fortress was carried by assault on May 4, 1799, and his body was found among the slain.

After mature deliberation it was decided to restore the descendant of the former Rājās, under British protection, to the sovereignty of part of the dominions thus left vacant, and to divide the rest among the allies. The young prince, Krishna Rājā Wodeyar, five years old, was placed on the throne on June 30. Colonel Arthur Wellesley (the future Duke of Wellington) was invested with the entire civil and military control of the State; Pūrnaiya, the Brāhman minister of Haidar and Tipū, was made Dīwān; and Colonel (afterwards Sir) Barry Close was appointed Resident. Colonel Wellesley soon put down the marauding chiefs who strove to establish themselves in various parts, the country was reduced to good order, and the government was eminently successful. A considerable portion of the Mysore army subsequently took part in the war against the Marāthās, marked by Wellesley's decisive victories on the fields of Assaye and Argaon.

In 1811 the Rājā, having come of age, was entrusted with the government and Pūrnaiya retired, dying the following year. The reign began with the brightest prospects, but the Rājā's extravagance and lack of governing ability soon brought the affairs of a prosperous country to the verge of ruin. By 1814 the treasure accumulated by Pūrnaiya had been dissipated on worthless favourites, the pay of the army was in arrears, and the counsels of good advisers were unheeded. Offices of state were sold to the highest bidder, and the revenue was realized under an oppressive system called *sharti*. The jails were filled with prisoners awaiting sentence, to award which the judges had no power. The British Government warned the Rājā of the consequences of his reckless conduct, and in 1825 Sir Thomas Munro, Governor of Madras, personally visited Mysore to remonstrate with him. But little good resulted, and in 1830 disaffection came to a head in the Nagar country. A pretender was set up, and the insurrection spread to other parts. The State troops were sent against the insurgents; but the latter continued to increase in strength, and it became imperative to employ the British subsidiary force. After

various operations, Nagar was taken and the rebellion brought to an end.

The British Government now appointed a Committee to inquire into the affairs of Mysore; and on their report the Governor-General, Lord William Bentinck, resolved to act upon a clause of the original treaty made with the Rājā, and to deprive him of ruling power. In October, 1831, he peaceably surrendered the reins of government to the British Commissioners appointed to administer the country. The Rājā himself was allowed to remain at the capital, and a liberal provision was made for him. The Mysore Commission consisted at first of a very few British officers, at the head of whom from 1834 was Colonel (afterwards Sir) Mark Cubbon. It was an onerous task to free the administration from the abuses of long standing which had crept into every department, and to place the revenues on a sound basis. But his wise and patient measures gradually bore fruit in a people made happy by release from serfdom, and a ruined State restored to financial prosperity. No less than 769 petty items of taxation were swept away, but the revenue continued to rise; and numberless oppressive practices were remedied. The Governor-General, Lord Dalhousie, visited Mysore in 1855, and recorded his full appreciation of what had been done, but considered that the time had come to bring the system of administration into accordance with modern ideas. Judicial, public works, and educational departments were therefore formed, and a larger British element brought in. In 1861 Sir Mark Cubbon fell ill, and retired from the position he had long filled with great honour.

The Rājā had no male heir; and though his loyalty in the Mutiny was undoubted, a *sanad* of adoption was not granted to him by Lord Canning, on the ground that he was not a ruling chief. The Rājā, however, exercised his right as a Hindu, and adopted a son in 1865; and after some deliberation the adoption was recognized in 1867 as valid in regard to the succession also. With the satisfaction that his dynasty would be continued, he died in 1868, at the ripe age of seventy-four.

Meanwhile, many changes had been made in the administration of Mysore, bringing it more into line with the Regulation Provinces. On Mr. Bowring, who succeeded Sir Mark Cubbon in 1862, the introduction of these innovations devolved. The State was portioned into new Divisions and Districts, with a larger staff of British officers. Revenue survey and *inām* settlement, channel and forest conservancy, village schools and municipalities, were some of the new measures brought into operation before the recognition by the British Government of a successor to the throne and during the minority of the new Rājā.

This young prince was carefully trained for his position under European tutors; and on his attaining his majority, the rendition of Mysore was carried out on March 25, 1881, on terms embodied in an Instrument of Transfer[1], which superseded all former treaties. The powers of the Mahārājā were defined, and the subsidy to be paid in lieu of military assistance was enhanced. Mr. C. Rangāchārlu was appointed Dīwān, and continued at the head of the administration till his death in 1883. He was assisted by a small Council, and the formation of what was called a Representative Assembly was one of the most prominent measures of his time. The reduction of expenditure being imperative, owing to the disastrous effects of the famine of 1876–8, European officers were freely dispensed with, many posts were abolished, various Districts broken up, and judicial offices and jails reduced. The British Government gave substantial relief by postponing the levy of the enhanced subsidy of 10½ lakhs for five years.

Mr. (from 1893, Sir) K. Sheshādri Iyer succeeded as Dīwān; and during his tenure of office, which he held till near his death in 1901, Mysore was raised to a high state of prosperity. Protection against famine, which had again threatened the State in 1884 and 1891, was specially in view in the earlier operations. Railways and irrigation works were pushed on, and the British Government again postponed for ten years the payment of the increased subsidy. By that time the revenue had more than doubled, the State debts had been extinguished, and surplus funds had accumulated in the treasury. This result was not due to new taxation in any form. Next to good seasons, it was the effect of natural growth, under the stimulus afforded by the opening out of the country by means of new roads and railways, the execution of important irrigation works, and the general expansion of industries, as well as in some measure of a better management of particular sources of revenue. Every branch of the administration was strengthened and improved; public works of unsurpassed magnitude were carried out; gold-mining was fostered in such a manner as to bring in a very substantial addition to the coffers of the State; postal facilities were greatly increased; cavalry and transport corps were maintained for imperial defence; educational institutions and hospitals were established on a large scale; civil service examinations of a high standard were instituted; departments were formed for archaeology and for the management of religious and charitable institutions, later also for meteorology and geology; laboratories were founded for bacteriology and agricultural chemistry; and, to crown all, the Cauvery Falls were harnessed and the first electric power works in India installed. To glance at the reverse

[1] See *Mysore Gazetteer* (1897 edition), vol. i, p. 450.

of the shield, the fell spectre of plague appeared at Bangalore in August, 1898, and has since stalked through all parts. But this dire foe was vigorously grappled with. Congested areas were opened out, and general sanitary improvements enforced. The vacancy in the office of Dīwān was filled in 1901 by Mr. (now Sir) P. N. Krishna Mūrti, descended from Pūrnaiya, who was succeeded in 1906 by Mr. V. P. Mādhava Rao.

At the end of 1894 occurred at Calcutta the sudden death of the universally respected Mahārājā Chāma Rājendra Wodeyar, in whose person the administration of Mysore had been revived in 1881, and the Mahārānī became Regent during the minority of her eldest son. This young prince, Krishna Rājā Wodeyar, who has been assiduously trained by European tutors, on attaining his majority was invested with power in 1902 by the Viceroy in person.

An epigraphic survey has been completed of the whole State[1], and about 9,000 inscriptions copied *in situ*[2]. The most memorable discovery was that of edicts of Asoka in the Molakālmuru *tāluk* in 1892, thus lifting the veil that had hidden the ancient history of the South and marking an epoch in Indian archaeology. These and the Jain inscriptions at Sravana Belgola relating to Chandra Gupta and Bhadrabāhu, and the Sātakarni inscription at Malavalli in the Shikārpur *tāluk*, have filled up the gap between the rise of the Mauryas and that of the Kadambas. The origin and accession to power of the latter have been made clear by the Tālgunda pillar-inscription in the same *tāluk*, while the Vokkaleri plates from Kolār District throw light upon the true significance of the Pallavas. The forgotten dynasties of the Mahāvalis or Bānas, and of the Gangas who ruled Mysore for so long, have been restored to history. The chronology of the Cholas has for the first time been definitely fixed. The birthplace of the Hoysalas has been discovered, and their history worked out in detail. Most important additions have been made to the information relating to the Chālukyas, the Rāshtrakūtas, the Nolambas, the Seunas, the Vijayanagar kings, and other more modern dynasties.

There have been finds of prehistoric punch-marked pieces, called *purāna* by the earlier Sanskrit writers, at Nagar; of Buddhist leaden coins of the Andhra period, second century B.C. to second century A.D., at Chitaldroog; and of Roman coins dating from 21 B.C. to A.D. 51, near Bangalore. Hoysala coins, before unknown, have been identified and their legends deciphered. The diversified coins of the modern

[1] An Archaeological department was formed in 1890, under Mr. Lewis Rice, who had been engaged for some years previously in archaeological work, in conjunction with other duties.

[2] These are published in a series called *Epigraphia Carnatica*, extending to twelve volumes.

States that occupied Mysore, and of Haidar and Tipū, have been tabulated and described.

Palm-leaf manuscripts have been collected, bringing to light the Kanarese literature from the earliest period, which had been lost in oblivion[1].

Prehistoric stone monuments, such as cromlechs and kistvaens, are found in most of the rocky tracts. The latter, generally called *Pāndu koli*, are known in Molakālmuru as *Moryara mane*, 'houses of the Moryas' or Mauryas, and they are so named also among the Badagas of the Nīlgiris. Stone slabs erected as memorials of heroes who fell in battle are called *vīrakal*. They are sculptured with bas-reliefs, of which the bottom one depicts the hero's last fight, and the others his triumphal ascent to paradise and rest there. Similar memorials to widows who have become *satī* and been burnt with their husbands are called *māstikal*. They bear the figure of a post with a human arm extended from it, holding a lime between the thumb and forefinger. These are found mostly in the west.

The Jain temples are called *basadi* or *bastī*, and are in the Dravidian style. The chief group is on Chandragiri at Sravana Belgola. They are more ornamental externally than Jain temples in the North of India, and, Fergusson considers, bear a striking resemblance to the temples of Southern Babylonia. In front is often a *māna-stambha*, a most elegant and graceful monolith pillar, 30 to 50 feet high, surmounted by a small shrine or statue—lineal descendants, says the same authority, of the pillars of the Buddhists. But the Jains also have *bettas*, literally 'hills,' which are courtyards on a height, open to the sky, and containing a colossal nude image of Gomata. That at Sravana Belgola is 57 feet high[2], and stands on the summit of Indragiri, 400 feet in elevation. It was erected about 983 by Chāmunda Rāya, minister of the Ganga king. Nothing grander or more imposing, says Fergusson, exists anywhere out of Egypt, and even there no known statue exceeds it in height.

The Hindu temples are of either the Chālukyan or the Dravidian style. The Hoysalas were great promoters of art, and temples erected by them or under their patronage in the twelfth and thirteenth centuries, in the highly ornate Chālukyan style, are not surpassed by any in India. The best existing examples are those at Halebīd, Belūr, and Somanāthpur. Fergusson, than whom there is no higher authority, says:—

'The great temple at Halebīd, had it been completed, is one of the

[1] See introduction to *Karnātaka-Sabdānusāsana*. This and other classical works are being published in a series called *Bibliotheca Carnatica*, of which six volumes have been issued.

[2] The only other two known, which are in South Kanara and much more modern, their dates being 1431 and 1603, are 41 and 37 feet high.

buildings on which the advocate of Hindu architecture would desire to take his stand. The artistic combination of horizontal with vertical lines, and the play of light and shade, far surpass anything in Gothic art. The effects are just what mediaeval architects were often aiming at, but which they never attained so perfectly[1].'

Examples of temples in the Dravidian style, of which the *gopuram* or pyramidal tower is generally the most imposing feature, may be seen at Seringapatam, Chāmundi, Melukote, and other places in the south. The bridges of Hindu construction at Seringapatam and Sivasamudram are noticed in connexion with the CAUVERY.

Of Saracenic architecture the best remains are the Mughal buildings at Sīra, and the Pathān mosque at Sante Bennūr. The Gumbaz or mausoleum of Haidar and Tipū at Ganjam and the mosque at Seringapatam deserve notice. But the most ornamental is the Daryā Daulat, Tipū's summer palace at the latter place. Mr. J. D. Rees, who has travelled much in India and Persia, says:—

'The lavish decorations, which cover every inch of wall from first to last, from top to bottom, recall the palaces of Ispahān, and resemble nothing that I know in India.'

The temples of the Malnād in the west correspond in style to those of Kanara. The framework is of wood, standing on a terrace of laterite, and the whole is covered with a tiled and gabled roof. The wooden pillars and joists are often well carved.

Population.

The table below gives details of the population of the State and its constituent Districts as returned at the Census of 1901:—

District.	Area in square miles.	Number of Towns.	Number of Villages.	Total population. Persons.	Total population. Males.	Total population. Females.	Urban population. Persons.	Urban population. Males.	Urban population. Females.	Persons per square mile in rural areas.
Bangalore .	3,092	18	2,750	879,263	441,912	437,351	230,147	116,466	113,681	212
Kolār . .	3,180	12	3,409	723,600	367,683	355,917	88,860	47,745	41,115	201
Tumkūr .	4,158	18	2,753	679,162	342,070	337,092	58,668	29,331	29,337	149
Mysore . .	5,496	27	3,212	1,295,172	641,150	654,022	163,062	81,389	81,673	206
Hassan . .	2,647	14	2,546	568,919	283,043	285,876	45,901	23,207	22,694	197
Kadūr . .	2,813	10	1,352	362,752	190,126	172,626	40,698	21,739	18,959	115
Shimoga .	4,025	14	2,017	531,736	277,258	254,478	41,236	21,082	20,154	122
Chitaldroog	4,022	15	1,440	498,795	253,782	245,013	53,531	26,918	26,613	111
Total	29,433	128	19,479	5,539,399	2,797,024	2,742,375	722,103	367,877	354,226	164

Taking the natural divisions of Malnād and Maidān, 17 per cent. of the area of the State and 12 per cent. of the population belong to the

[1] *History of Indian and Eastern Architecture.* See also *Architecture of Dharwar and Mysore*, where he says: 'It is worthy of remark that the great architectural age in India should have been the thirteenth century, which witnessed such a wonderful development of a kindred style [meaning the Gothic] in Europe.'

first, and the remainder to the second. The mean density is 185 persons per square mile. Mysore is the largest District, and contains the dynastic capital. Its total population is the highest, but in density of rural population it stands second. Bangalore District, the sixth in area, is second in total population and first in density of rural population. In it are situated the administrative capital of Mysore, and the Civil and Military Station with its large garrison, which is an Assigned Tract under British administration. The most populous *tāluks* are those watered by the Cauvery, with Bangalore and Anekal.

The urban population is 13 per cent. of the whole. Four places have been treated as cities in the Census of 1901: namely, Mysore, Bangalore, the adjoining British Civil and Military Station, and the Kolār Gold Fields. The population of Bangalore (taking the city and the Civil and Military Station together) was 159,046, of Mysore city 68,111, and of the Gold Fields 38,204. Owing chiefly to plague, there had been since 1891 a loss of 21,320 in Bangalore and of 5,937 in Mysore, while, in spite of plague, the Gold Fields gained 31,119. The number of towns is 124, of which Mysore, Tumkūr, and Bangalore Districts contain 26, 18, and 16 respectively, and Kolār and Kadūr only 11 and 10. A town is a municipality of whatever size, or a place not absolutely rural containing a population of 5,000 and above. Only five of these towns have a population exceeding 10,000—Kolār, Tumkūr, Channapatna, Dāvangere, and Tarikere—while the population of twenty-seven lies between 5,000 and 10,000, of which eight belong to Mysore and five to Bangalore District. The inhabited villages number 16,884. In the Maidān a village may have dependent hamlets grouped with it. In the Malnād, villages are often such only in name, being composed of scattered homesteads at various distances apart. The towns and villages vary little as regards the main occupations and habits of life of the people, but those which are also market places or *tāluk* head-quarters become centres of trade and home industries. The number of houses per square mile rose from 25 in 1881 to 37 in 1901, and the occupants per house averaged 5 at the latter date as compared with 5·6 twenty years before.

The variation in total population at each Census has been: (1871) 5,055,102, (1881) 4,186,188, (1891) 4,943,604, and (1901) 5,539,399. The fall in 1881 was due to the great famine of 1876–8, but was almost compensated by the rise in 1891. In spite of plague, the last Census shows a marked general increase of 12 per cent. The rise has been greatest in Kolār and Chitaldroog Districts, and least in Kadūr, the population of which has scarcely varied. The increase in the Districts of Mysore, Hassan, and Shimoga is below the average.

In 1901, according to the census returns, 306,381 persons enumerated

in the State had been born out of it, and 132,342 born in the State were registered elsewhere. The greatest increase of foreign immigrants is of course in Kolār, in connexion with the gold-mines. But all the Districts show an increase under this head, especially Hassan and Kadūr, which are coffee-growing tracts.

The percentage distribution of the total population under different age periods is as follows: 13·03 of ages 0 to 5; 26·87 of 5 to 15; 22·01 of 15 to 30; 20·63 of 30 to 45; 11·93 of 45 to 60; and 5·51 of 60 and over. Females are in a total ratio of 981 to 1,000 males, but they exceed males at ages 3 to 4, 20 to 35, 50 to 55, and at 60 and over.

Except in Bangalore city and Civil and Military Station, and in Mysore city, vital statistics cannot be accepted as reliable; and even in those places it is chiefly since the outbreak of plague in 1898 that particular attention and scrutiny have been given to them, with special reference to the number of deaths. In other parts the *pātel* or headman has to keep up the register, under the control of the revenue officers; but as there is no obligation on householders to report domestic occurrences, he can hardly be held responsible for the accuracy of the returns. The following table is compiled from such statistics as are available, but the numbers of both births and deaths are manifestly understated:

Year.	Population under registration.	Ratio of registered births per 1,000.	Ratio of registered deaths per 1,000.	Deaths per 1,000 from			
				Cholera.	Small-pox.	Fever.	Bowel com-plaints.
1881	4,186,188	23·77	17·01	0·01	0·61	10·47	1·15
1891	4,843,523	19·80	14·03	0·25	1·05	7·91	1·02
1901	5,449,800	15·28	19·98	2·08	1·19	8·12	1·04
1904	5,449,800	14·05	21·83	0·09	0·23	10·64	1·12

For the decade ending 1901, Chitaldroog and Mysore show the highest and lowest birth-rates respectively, and Shimoga and Tumkūr the highest and lowest death-rates.

There were 1,025,838 cases treated in the hospitals and dispensaries of the State in 1901, of which 46 per cent. were those of men, and the rest of women and children in the proportion of about 2 to 3. The diseases treated are classed as general or local, 42 per cent. belonging to the former class. Of these, the most numerous were malarial fevers, worms, rheumatic affections, debility and anaemia, and venereal diseases. Of local, the greater number were diseases of the skin, the digestive system, the eye, the lungs, and injuries.

Plague first appeared in August, 1898, at Bangalore, being imported by rail from Dhārwār. By the end of June, 1904, it had claimed 106,950 victims in the whole State, out of 141,403 cases of seizure. In

other words, 2·5 per cent. of the population were attacked by plague, and of those attacked nearly 76 per cent. died. The figures for each year show a large decrease in 1899–1900 and a rise since. With 1903–4 the numbers are again going down. The temporary decrease in the second year was probably due to extensive exodus to other parts, a drier season owing to deficient rainfall, general inoculation, and enforcement of passport regulations. Special restrictions have since been virtually withdrawn; but evacuation of infected places, general or local disinfection by chemicals or desiccation, and the opening out of congested parts are in operation[1]. No place has suffered more than Mysore city, where 17 per cent. of the deaths have occurred. A regulation was passed in 1903 appointing a special board for the improvement of the city. Shimoga and Kadūr Districts were free till 1900, and Chitaldroog District had no deaths from plague in that year. The disease seems to be at its maximum about October, and at its minimum about May, these being respectively the wettest and driest months in the year.

The figures obtained at the Census of 1901 are a gauge of the infant mortality occasioned by the famine of 1876–8, and by the unhealthy years, culminating in plague, of the decade ending 1901. The following table gives the ratio of infants of either sex to 1,000 of the same sex:—

Age.	1881.		1891.		1901.	
0–5 .	M. 91	F. 98	M. 138	F. 147	M. 128	F. 132
5–10 .	M. 137	F. 141	M. 136	F. 141	M. 142	F. 145

The proportion of females to 1,000 males in the whole State in 1901 was 981, the figures for the urban population being 963, and for the rural 983. In 1871 the proportion was 994, in 1881 it was 1,007, and in 1891 it was 991. The relative number of females has thus fallen considerably in the thirty years. Hindus exceeded the general average at each Census. Christians had the fewest females in the three previous census years, and in 1901 this position was held by the Jains. Females exceed males in Mysore and Hassan Districts (1,020 and 1,010), and are most in defect in Shimoga and Kadūr (918 and 908). In the Civil and Military Station of Bangalore the ratio is 986, in Mysore city 984, in Bangalore city 931, and in the Kolār Gold Fields only 699, as might be expected. Since 1891 males have increased by 12·6 per cent. and females by 11·4.

The unmarried, the married, and the widowed are respectively 47·46, 40·34, and 12·20 per cent. of the population. Females form 41 per cent.

[1] Large extensions have been added to Bangalore city, and a new town on modern lines has been laid out at the Kolār Gold Fields.

of the unmarried, 51 of the married, and 79 of the widowed. Christians have the highest proportion of unmarried and the lowest of widowed in both sexes. Next come Animists and Musalmāns, with lower proportions of unmarried and higher of widowed. The Jains have a higher ratio of bachelors than the Hindus, but among them spinsters are proportionately fewest and widowers and widows most numerous.

Infant marriage of girls prevails most among the Jains and Hindus, and scarcely at all among Christians, but there are cases in all religions. Of 1,000 married females, 54 are under five years of age. But of course these are really cases of betrothal, though as irrevocable as marriage, and causing widowhood if death should intervene. Chitaldroog District shows the highest proportion of such cases; certain subdivisions of Wokkaligas there are said to have a custom of betrothing the children of near relations to one another within a few months of their birth, the *tāli*, or token of the marriage bond, being tied to the cradle of the infant girl. Some of the Panchāla artisans and devotee Lingāyats seem especially given to infant marriage. By a Regulation of 1894 the marriage of girls under 8 has been prohibited in Mysore, and also that of girls under 14 to men of over 50. Of the total number of married females, 7·6 per cent. are under 15, and 12·3 per cent. between 15 and 20. Among Brāhmans and Komatis girls must be married before puberty, and in the majority of cases the ceremony takes place between 8 and 12. In other castes girls are mostly married between the ages of 10 and 20. Above this age there are very few spinsters, and these principally among native Christians, though among Lambānis and Iruligas, classed as Animists, brides are often over 30. Of widows, more than 73 per cent. are over 40. Roughly speaking, among Christians and Jains one widow in 3 is under 40, in the other religions one in 4. After 40 more than half the women are widows. Remarriage of widows is utterly repugnant to most Hindu castes, though permissible in some of the lower ones. It appears from the census returns that 5·8 per cent. of widows were remarried; but this was principally among Woddas and Jogis, who are not socially very important, and among Musalmān Labbais and nomad Koramas.

Of the male sex, seven youths under 15 in 1,000 are married; from 15 to 20 there are 13·3 per cent. married and 0·2 per cent. widowers: from 20 to 40 there are 69 per cent. married and 3·7 per cent. widowers; over 40 there are 78·7 per cent. married and 17·7 per cent. widowers.

Polygamy is rare, though allowed by all classes except Christians. Cast-off or widowed women of the lower orders sometimes attach themselves as concubines to men who have legitimate wives. Among the higher castes a second wife is taken only when the first proves barren, or is incurably ill, or immoral. But unless put away for

immoral conduct, the first wife alone is entitled to join the husband in religious ceremonies, and the second can do so only with her consent. The proportion of married men who have more than one wife is 18 in 1,000. Animists and Musalmāns stand highest in this respect, and next come labouring and agricultural classes such as Woddas, Idigas, Wokkaligas, and Kurubas.

There are no statistics for divorce. Polyandry and infanticide are unknown in Mysore, as also inheritance through the mother. The joint family system continues among Hindus, but modern influences are tending to break it up.

The distinctive language of Mysore is Kannada, the Karnāta or Karnātaka of the *pandits*, and the Kanarese of European writers. It is the speech of 73 per cent. of the population, and prevails everywhere except in the east. Telugu, confined to Kolār District and some of the eastern *tāluks*, is the language of 15 per cent. Tamil (called here Arava) is the speech of 4 per cent., and predominates at the Kolār Gold Fields and among the servants of Europeans, camp-followers, and cantonment traders. A more or less corrupt Tamil is spoken by certain long-domiciled classes of Brāhmans (Srīvaishnava, Sanketi, and Brihachcharana), and by Tigala cultivators, but its use is only colloquial. Marāthī, which is spoken by 1·4 per cent. of the population, is the language of Deshasth Brāhmans and Darzis or tailors, the former being most numerous in Shimoga District. Hindustāni, the language of Musalmāns, who form 5·22 per cent. of the population, is spoken by only 4·8 per cent., the difference being due to the Labbais and other Musalmāns from the south who speak Tamil. In each of these vernaculars there has been since 1891 an increase of about 11 per cent., except in Tamil, which has increased 42 per cent., owing to the influx of labour at the gold-mines and partly on the railways.

The Hindus have been arranged under 72 castes or classes. Of these, the strongest numerically are Wokkaligas (1,287,000), Lingāyats (671,000), and Holeyas (596,000), who between them make up 46 per cent. of the total population. The Wokkaligas (in Hindustāni, Kunbī) are the cultivators or ryots. They include numerous tribes, some of Kanarese and some of Telugu origin, who neither eat together nor intermarry. Their headmen are called Gaudas. Marriage is not always performed before puberty, and polygamy has some vogue, the industry of the women being generally profitable to the husband. Widow remarriage is allowed, but lightly esteemed. The Wokkaligas are mostly vegetarians and do not drink intoxicating liquor. They bury their dead. The Gangadikāra, who form nearly one-half of the class, are purely Kanarese, found chiefly in the central and southern tracts. They represent the subjects of the ancient Gangavādi which formed the nucleus of the Ganga empire. At the present day they are

followers some of Siva and some of Vishnu. Next in numbers are the Morasu Wokkaligas, chiefly in Kolār and Bangalore Districts. They appear to have been originally immigrants from a district called Morasu-nād, to the east of Mysore, whose chiefs formed settlements at the end of the fourteenth century in the parts round Nandidroog. The section called Beralukoduva ('finger-giving') had a strange custom, which, on account of its cruelty, was put a stop to by Government. Every woman of the sect, before piercing the ears of her eldest daughter preparatory to betrothal, had to suffer amputation of the ring and little fingers of the right hand, the operation being performed by the village blacksmith with a chisel. The sacred place of the Morasu Wokkaligas is Sīti-betta in the Kolār *tāluk*, where there is a temple of Bhairava. Of other large tribes of Wokkaligas, the Sāda abound mostly in the north and west. They include Jains and Lingāyats, Vaishnavas and Saivas. Not improbably they all belonged originally to the first. In the old days many of them acted in the Kandāchār or native militia. They are not only cultivators but sometimes trade in grain. The Reddi are found chiefly in the east and north, and have numerous subdivisions. To some extent they seem to be of Telugu origin, and have been supposed to represent the subjects of the ancient Rattavādi, or kingdom of the Rattas. The Nonabas, in like manner, are relics of the ancient Nolambavādi or Nonambavādi, a Pallava province, situated in Chitaldroog District. At the present day they are by faith Lingāyats, the residence of their chief *gurū* being at Gaudikere near Chiknāyakanhalli. The acknowledged head of the Nonabas lives at Hosahalli near Gubbi. The Halepaiks of the Nagar Malnād are of special interest as being probably aboriginal. Their name is said to mean the 'old foot,' as they furnished the foot-soldiers and body-guards of former rulers, to whom they were noted for their fidelity. Their principal occupation now is the extraction of toddy from the *bagni*-palm (*Caryota urens*), the cultivation of rice land, and of *kāns* or woods containing pepper vines; but they are described as still fond of fire-arms, brave, and great sportsmen. In Vastāra and Tuluva (South Kanara) they are called Billavas or 'bowmen.' In Manjarābād they are called Devara makkalu, 'God's children.' The Hālu Wokkaligas are mostly in Kadūr and Hassan Districts. They are dairymen and sell milk (*hālu*), whence their name, as well as engage in agriculture. The Hallikāra are also largely occupied with cattle, the breed of their name being the best in the Amrit Mahāl. The Lālgonda, chiefly found in Bangalore District, not only farm, but hire out bullocks, or are gardeners, builders of mud walls, and traders in straw, &c. The Vellāla are the most numerous class of Wokkaligas in the Civil and Military Station of Bangalore. Another large class, as numerous as the Reddi, are the Kunchitiga, widely spread but mostly found in the

central tracts. The women prepare and sell *dāl* (pigeon pea), while the men engage in a variety of trades.

The Holeyas (Tamil, Paraiya; Marāthī, Dhed) are outcastes, occupying a quarter of their own, called the Holageri, outside every village boundary hedge. They are indigenous and probably aboriginal. They have numerous subdivisions, which eat together but only intermarry between known families. A council of elders decides all questions of tribal discipline. They are regarded as unclean by the four principal castes, and particularly by the Brāhmans. In rural parts especially, a Holeya, having anything to deliver to a Brāhman, places it on the ground and retires to a distance, and on meeting a Brāhman in the road endeavours to get away as far as possible. Brāhmans and Holeyas mutually avoid passing through the parts they respectively occupy in the villages; and a wilful transgression in this respect, if it did not create a riot, would make purification necessary, and that for both sides. They often take the vow to become Dāsari, and regard the Sātāni as priests, but a Holeya is himself generally the priest of the village goddess. Under the name of Tirukula, the Holeyas have the privilege of entering the great temple at Melukote once a year to pay their devotions, said to be a reward for assisting Rāmānuja to recover the image of Krishna which had been carried off to Delhi by the Musalmāns. The Holeya marriage rite is merely a feast, at which the bridegroom ties a token round the bride's neck. A wife cannot be divorced except for adultery. Widows may not remarry, but often live with another man. The Holeyas eat flesh and fish of all kinds, and even carrion, provided the animal died a natural death, and drink spirituous liquors. As a body the Holeyas are the servants of the ryots, and are mainly engaged in following the plough and watching the herds. They also make certain kinds of coarse cloth, worn by the poorer classes. The Alemān section furnishes recruits for the Barr sepoy regiments. In the Maidān a Holeya is the *kulavādi*, and has a recognized place in the village corporation. He is the village policeman, the beadle, and the headman's factotum. The *kulavādis* are the ultimate referees in cases of boundary disputes, and if they agree no one can challenge the decision. In the Malnād the Holeya was merely a slave, of which there were two classes: the *huttāl*, or slave born in the house, the hereditary serf of the family; and the *mannāl*, or slave of the soil, who was bought and sold with the land. Now these have of course been emancipated, and some are becoming owners of land. In urban centres they are rising in respectability and acquiring wealth, so that in certain cases their social disabilities are being overcome, and in public matters especially their complete ostracism cannot be maintained.

Ten other castes, each above 100,000, make up between them 30

per cent. of the population. They are the Kuruba (378,000), Mādiga (280,000), Beda or Bedar (245,000), Brāhman (190,000), Besta (153,000), Golla (143,000), Wodda (135,000), Banajiga (123,000), Panchāla (126,000), and Uppāra (106,000). The Kurubas are shepherds and weavers of native blankets (*kambli*). There is no intercourse between the general body and the division called Hande Kurubas. The former worship Bīre Deva and are Saivas, their priests being Brāhmans and Jogis. The caste also worship a box, which they believe contains the wearing apparel of Krishna, under the name of Junjappa. Parts of Chitaldroog and the town of Kolār are noted for the manufacture by the Kurubas there of a superior woollen of fine texture like homespun. The women spin wool, and as they are very industrious, polygamy prevails, and even adultery is often condoned, their labour being a source of profit. The wild or Kādu Kurubas (8,842) are subdivided into Betta or 'hill,' and Jenu or 'honey,' Kurubas. The former are a small and active race, expert woodmen, and capable of enduring great fatigue. The latter are a darker and inferior race, who collect honey and beeswax. Their villages or clusters of huts are called *hadi*; and a separate hut is set apart at one end for the unmarried females to sleep in at night, and one at the other end for the unmarried males, both being under the supervision of the headman. Girls are married only after puberty, either according to the Wokkaliga custom, or by a mere formal exchange of areca-nut and betel-leaf. Polygamy exists, but the offspring of concubines are not considered legitimate. All kinds of meat except beef are eaten, but intoxicating drinks are not used. In case of death, adults are cremated and children buried. The Betta Kurubas worship forest deities called Norāle and Māstamma, and are said to be revengeful, but if treated kindly will do willing service. The Jenu Kurubas neither own nor cultivate land for themselves, nor keep live-stock of their own. Both classes are expert in tracking wild animals, as well as skilful in eluding pursuit by wild animals accidentally encountered. Their children when over two years old move about freely in the jungle.

The Mādigas are similar to the Holeyas, but distinguished from them by being workers in leather. They remove the carcases of dead cattle, and dress the hides to provide the villagers with leathern articles, such as the thongs for bullock yokes, buckets for raising water, &c. They are largely engaged in field labour, and in urban centres are earning much money, owing to the increasing demand for hides and their work as tanners. They worship Vishnu, Siva, and their female counterparts or Saktis, and have five different *gurūs* or *maths* in the State. They have a division called Desabhāga, who do not intermarry with the others. They acknowledge Srīvaishnava Brāhmans as their *gurūs*, and have also the names Jāmbavakula and Mātanga. They are

privileged to enter the courtyard of the Belūr temple at certain times to present the god with a pair of slippers, which it is the duty of those in Channagiri and Basavāpatna to provide. Their customs are much the same as those of the Holeyas. The Bedas (Bedar), or Naiks, are both Kanarese and Telugu, the two sections neither eating together nor intermarrying. One-third are in Chitaldroog District, and most of the rest in Kolār and Tumkūr. They were formerly hunters and soldiers by profession, and largely composed Haidar's and Tipū's infantry. Many of the Mysore *poligārs* were of this caste. They now engage in agriculture, and serve as police and revenue peons. They claim descent from Vālmīki, author of the Rāmāyana, and are chiefly Vaishnavas, but worship all the Hindu deities. In some parts they erect a circular hut for a temple, with a stake in the middle, which is the god. In common with the Golla, Kuruba, Mādiga, and other classes, they often dedicate as a Basavi or prostitute the eldest daughter in a family when no son has been born; and a girl falling ill is similarly vowed to be left unmarried, i.e. to the same fate. If she bear a son, he is affiliated to her father's family. Except as regards beef, they are not restricted in food or drink. Polygamy is not uncommon, but divorce can be resorted to only in case of adultery. Widows may not remarry, but often live with another Beda. The dead are buried. The caste often take the vow to become Dāsari. Their chief deity is the god Venkataramana of Tirupati, locally worshipped under the name Tirumala, but offerings and sacrifices are also made to Māriamma. Their *gurū* is known as Tirumala Tātāchārya, a head of the Srīvaishnava Brāhmans. The Māchi or Myāsa branch, also called Chunchu, circumcise their boys at ten or twelve years of age, besides initiating them with Hindu rites. They eschew all strong drink, and will not even touch the date-palm from which it is extracted. They eat beef, but of birds only partridge and quail. Women in childbirth are segregated. The dead are cremated, and their ashes scattered on *tangadi* bushes (*Cassia auriculata*). This singular confusion of customs may perhaps be due to the forced conversion of large numbers to Islām in the time of Haidar to form his Chela battalions. The Telugu Bedas are called Boya. One section, who are *shikāris*, and live on game and forest produce, are called Myāsa or Vyādha. The others are settled in villages, and live by fishing and day labour. The latter employ Brāhmans and Jangamas as priests, but the former call in elders of their own caste. The Myāsa women may not wear toe-rings, and the men may not sit on date mats.

Bestas are fishermen, boatmen, and palanquin-bearers. This is their name in the east; in the south they are called Toreya, Ambiga, and Parivāra; in the west Kabyara and Gangemakkalu. Those who speak Telugu call themselves Bhoyi, and have a headman called Pedda

Bhoyi. One section are lime-burners. Some are peons, and a large number engage in agriculture. Their domestic customs are similar to those of the castes above mentioned. Their goddess is Yellamma, and they are mostly worshippers of Siva. They employ Brāhmans and Sātānis for domestic ceremonies. The Gollas are cowherds and dairymen. The Kādu or 'forest' Gollas are distinct from the Uru or 'town' Gollas, and the two neither eat together nor intermarry. One section was formerly largely employed in transporting money from one part of the country to another, and gained the name Dhanapāla. One of the servants in Government treasuries is still called the Golla. They worship Krishna as having been born in their caste. The Kādu Gollas are nomadic, and live in thatched huts outside the villages. At childbirth the mother and babe are kept in a small hut apart from the others for from seven to thirty days. If ill, none of her caste will attend on her, but a Naik or Beda woman is engaged to do so. Marriages are likewise performed in a temporary shed outside the village, to which the wedded pair return only after five days of festivity. Golla women do not wear the bodice, nor in widowhood do they break off their glass bangles. Remarriage of widows is not allowed.

The Woddas are composed of Kallu Woddas and Mannu Woddas, between whom there is no social intercourse or intermarriage. The Kallu Woddas, who consider themselves superior to the others, are stonemasons, quarrying, transporting, and building with stone, and are very dexterous in moving large masses by simple mechanical means. The Mannu Woddas are chiefly tank-diggers, well-sinkers, and generally skilful navvies for all kinds of earthwork, the men digging and the women removing the earth. Though a hard-working class, they have the reputation of assisting dacoits and burglars by giving information as to plunder. The young and robust of the Mannu Woddas of both sexes travel about in caravans in search of employment, taking with them their infants and huts, which consist of a few sticks and mats. On obtaining any large earthwork, they form an encampment in the neighbourhood. The older members settle in the outskirts of towns, where many of both sexes now find employment in various kinds of sanitary work. They were probably immigrants from Orissa and the Telugu country, and generally speak Telugu. They eat meat and drink spirits, and are given to polygamy. Widows and divorced women can remarry. Both classes worship all the Hindu deities, but chiefly Vishnu.

The Banajigas are the great trading class. The subdivisions are numerous, but there are three main branches—the Panchama, Telugu, and Jain Banajigas—who neither eat together nor intermarry. The first are Lingāyats, having their own priests, who officiate at marriages

and funerals, and punish breaches of caste discipline. Telugu Banajigas are very numerous. The Saivas and Vaishnavas among them do not intermix socially. The latter acknowledge the *gurū* of the Srīvaishnava Brāhmans. They frequently take the vow to become Dāsari. Many dancing-girls are of this caste. The Panchāla, as their name implies, embrace five guilds of artisans: namely, goldsmiths, brass and coppersmiths, blacksmiths, carpenters, and sculptors. They wear the triple cord and consider themselves equal to the Brāhmans, who, however, deny their pretensions. The goldsmiths are the recognized heads of the clan. The Panchāla have a *gurū* of their own caste, though Brāhmans officiate as *purohits*. The Uppāra are saltmakers. This is their name in the east; in the south they are called Uppaliga, and in the west Melusakkare. There are two classes, Kannada and Telugu. The former make earth-salt, while the latter are bricklayers and builders. They are worshippers of Vishnu and Dharma Rāya.

The agricultural, artisan, and trading communities form a species of guilds called *phana* (apparently a very ancient institution), and these are divided into two factions, termed Balagai (right-hand) and Yedagai (left-hand). The former contains 18 *phana*, headed by the Banajiga and Wokkaliga, with the Holeya at the bottom; while the latter contains 9 *phana*, with the Panchāla and Nagarta (traders) at the head, and the Mādiga at the bottom. Brāhmans, Kshattriyas, and most of the Sūdras are considered to be neutral. Each party insists on the exclusive right to certain privileges on all public festivals and ceremonies, which are jealously guarded. A breach on either side leads to faction fights, which formerly were of a furious and sometimes sanguinary character. Thus, the right-hand claim the exclusive privilege of having 12 pillars to the marriage *pandal*, the left-hand being restricted to 11; of riding on horseback in processions, and of carrying a flag painted with the figure of Hanumān. In the Census of 1891 the people by common consent repudiated the names Balagai and Yedagai, and preferred to return themselves as of the 18 *phana* or the 9 *phana*. In the Census of 1901 even this distinction was ignored, and the people returned themselves in various irreconcilable ways, mostly as belonging to the 12 *phana*. The old animosity of the factions seems to be wearing away.

Of nomad tribes, more than half are Lambānis and another fourth are Koracha, Korama, or Korava. The first are a gipsy tribe that wander about in gangs with large herds of bullocks, transporting grain and other produce, especially in the hilly and forest tracts. Of late years some have been employed on coffee estates, and some have even partially abandoned their vagrant life, and settled, at least for a time, in villages of their own. These, called *tāndas*, are composed of groups

of their usual rude wicker huts, pitched on waste ground in wild places. The women bring in bundles of firewood from the jungles for sale in the towns. The Lambānis speak a mixed dialect called Kutnī, largely composed of Hindī and Marāthī corruptions. The women are distinguished by a picturesque dress different from that worn by any other class. It consists of a sort of tartan petticoat, with a stomacher over the bosom, and an embroidered mantle covering the head and upper part of the body. The hair is worn in ringlets or plaits, hanging down each side of the face, decorated with small shells, and ending in tassels. The arms and ankles are profusely covered with trinkets made of bone, brass, and other rude materials. The men wear tight cotton breeches, reaching a little below the knee, with a waistband ending in red silk tassels, and on the head a small red or white turban. There is a class of Lambāni outcastes, called Dhālya, who are drummers and live separately. They chiefly trade in bullocks. The Lambānis hold Gosains as their *gurūs*, and reverence Krishna; also Basava, as representing the cattle that Krishna tended. But their chief object of worship is Banashankari, the goddess of forests. Their marriage rite consists of mutual gifts and a tipsy feast. The bridal pair also pour milk down an ant-hill occupied by a snake, and make offerings to it of coco-nuts and flowers. Polygamy is in vogue, and widows and divorced women may remarry, but with some disabilities. The Lambānis are also called Sukāli and Brinjāri. The Koracha, Korama, or Korava are a numerous wandering tribe, who carry salt and grain from one market to another by means of large droves of cattle and asses, and also make bamboo mats and baskets. The men wear their hair gathered up into a big knot or bunch on one side of the top of the head, resembling what is seen on ancient sculptured stones. The women may be known by numerous strings of small red and white glass beads and shells, worn round the neck and falling over the bosom. In the depths of the forest they are even said to dispense with more substantial covering. A custom like *couvade* is said to linger among the Korava, but this is not certain. The dead are buried at night in out-of-the-way spots. The women are skilful in tattooing. The Iruliga are the remaining wild tribe, and include the Sholaga, who live in the south-east in the Biligiri-Rangan hills. They are very dark, and are keen-sighted and skilful in tracking game. They cultivate small patches of jungle clearings with the hoe, on the *kumri* or shifting system. Polygamy is the rule among them, and adultery is unknown. When a girl consents to marriage, the man runs away with her to some other place till the honeymoon is over, when they return home and give a feast. They live in bamboo huts thatched with plantain leaves.

The percentage of the followers of each religion to the whole popu-

lation at the Census of 1901 was, in order of strength: Hindus, 92·1; Musalmāns, 5·2; Animists, 1·6; Christians, 0·9; Jains, 0·2. There remained 158 persons who were Pārsīs, Sikhs, Jews, Brahmos, or Buddhists; 101 were Pārsīs and 34 Jews. The percentage of increase in each religion since 1891 was: Christians, 31·3; Musalmāns, 14·5; Hindus, 11·5; Jains, 3.

Of Hindu religious sects in Mysore, Lingāyats are by far the strongest in numbers; and if, in addition to those returned as such, the Nonaba, Banajiga, and others belonging to the sect be taken into account, they cannot be much below 800,000. Their own name for themselves is Sivabhakta or Sivāchār, and Vīra Saiva. Their distinctive mark is the wearing of a *jangama* (or portable) *lingam* on the person, hence the name Lingāyata or Lingavanta. The *lingam* is a small stone, about the size of an acorn, enshrined in a silver casket of peculiar shape, worn suspended from the neck or bound to the arm. They also mark the forehead with a round white spot. The clerics smear their faces and bodies with ashes, and wear garments of the colour of red ochre, with a rosary of *rudrāksha* beads round the neck.

Phallic worship is no doubt one of the most ancient and widely diffused forms of religion in the world, and the Lingāyats of late have made doubtful pretensions to date as far back as the time of Buddha. Among the Saiva sects mentioned by the reformer Sankarāchārya as existing in India in the eighth century were the Jangamas, who he says wore the trident on the head and carried a *lingam* made of stone on their persons, and whom he denounces as unorthodox. Of this sect the Lingāyats claim to be the representatives. Whether this be so or not, it is undoubted that the Lingāyat faith has been the popular creed of the Kanarese-speaking countries from the twelfth century.

Lingāyats reject the authority of Brāhmans and the inspiration of the Vedas, and deny the efficacy of sacrifices and *srāddhas*. They profess the Saiva faith in its idealistic form, accepting as their principal authority a Saiva commentary on the Vedānta Sūtras. They contend that the goal of *karma* or performance of ceremonies is twofold—the attainment of *svarga* or eternal heavenly bliss, and the attainment of *jnāna* or heavenly wisdom. The former is the aim of Brāhman observances; the latter, resulting in union with the deity, is the *summum bonum* of the Lingāyats.

The Lingāyat sect in its present form dates from about 1160, a little more than forty years after the establishment of the Vaishnava faith and the ousting of the Jains in Mysore by Rāmānujāchārya. Its institution is attributed to Basava, prime minister of the Kalachuri king Bijjala, who succeeded the Chālukyas and ruled at Kalyāni (in the Nizām's Dominions) from 1155 to 1167. Basava (a vernacular form of the Sanskrit *vrishabha*, 'bull') was supposed to be an incarnation

of Siva's bull Nandi, sent to the earth to revive the Saiva religion. He was the son of an Arādhya Brāhman, a native of Bāgevādi in Bijāpur District. He refused to be invested with the sacred thread, or to acknowledge any *gurū* but Siva, and incurred the hostility of the Brāhmans. He retired for some time to Sangamesvara, where he was instructed in the tenets of the Vīra Saiva faith. Eventually he went to Kalyāni, where the king Bijjala, who was a Jain, married his beautiful sister and made him prime minister. This position of influence enabled him to propagate his religious system. Meanwhile, a sister who was one of his first disciples had given birth to Channa Basava, supposed to be an incarnation of Siva's son Shanmukha, and he and his uncle are regarded as joint founders of the sect. The Basava Purāna and Channa Basava Purāna, written in Hala Kannada, though not of the oldest form, containing miraculous stories of Saiva *gurūs* and saints, are among their chief sacred books. Basava's liberal use of the public funds for the support of Jangama priests aroused the king's suspicions, and he thoughtlessly ordered two pious Lingāyats to be blinded, which led to his own assassination. Basava and Channa Basava fled from the vengeance of his son, and are said to have been absorbed into the god. The reformed faith spread rapidly, superseding that of the Jains; and according to tradition, within sixty years of Basava's death, or by 1228, it was embraced from Ulavi, near Goa, to Sholāpur, and from Bālehalli (in Kadūr District) to Sivaganga (Bangalore District). It was a State religion of Mysore from 1350 to 1610, and especially of the Keladi, Ikkeri, or Bednūr kingdom from 1550 to 1763, as well as of various neighbouring principalities. Since the decline of the Jains, the Lingāyats have been preservers and cultivators of the Kanarese language.

The sect was originally recruited from all castes, and observances of caste, pilgrimage, fasts, and penance were rejected. Basava taught that all holiness consisted in regard for three things, *gurū*, *lingam*, and *jangam*—the guide, the image, and the fellow religionist. But caste distinctions are maintained in regard to social matters, such as intermarriage. The *lingam* is tied to an infant at birth, must always be worn to the end of life, and is buried with the dead body. At a reasonable age the child is initiated by the *gurū* into the doctrines of the faith. All are rigid vegetarians. Girls are married before puberty. Widows do not marry again. The dead are buried. The daily ritual consists of Saiva rites, and it may be stated that *lingam* worship, in both act and symbol, is absolutely free from anything indecorous. Five spiritual thrones or *simhāsanas* were originally established: namely, at Bālehalli (Kadūr District), Ujjain, Kāsī (Benares), Srīsailam (Kurnool District), and Kedārnāth (in the Himālayas). *Maths* still exist in these places and exercise jurisdiction over their respective spheres.

The Lingāyats are a peaceful and intelligent community, chiefly engaged in trade and agriculture. In commerce they occupy a very prominent place, and many are now taking advantage of the facilities for higher education and qualifying for the professions.

The Brāhmans (190,050) are divided among four sects: namely, Smārtas, who form 63 per cent.; Mādhvas, 23 per cent.; Srīvaishnavas, 10 per cent.; and Bhāgavatas, 4 per cent. Smārtas are followers of the *smriti*, and hold the Advaita doctrine. Their chief deity is Siva, and the sect was founded by Sankarāchārya in the eighth century. Their *gurū* is the head of the *math* established by him at Sringeri (Kadūr District), who is styled the Jagad Gurū. They are distinguished by three parallel horizontal lines of sandal paste or cow-dung ashes on the forehead, with a round red spot in the centre. The Mādhvas are named after their founder Madhvāchārya, who lived in South Kanara in the thirteenth century. They especially worship Vishnu, and hold the Dvaita doctrine. Their *gurūs* are at Nanjangūd, Hole-Narsipur, and Sosile. They wear a black perpendicular line from the junction of the eyebrows to the top of the forehead, with a dot in the centre. The Srīvaishnavas worship Vishnu as identified with his consort Srī, and hold the Visishtādvaita doctrine. The sect was founded by Rāmānujāchārya early in the twelfth century. There are two branches: the Vadagalai ('northerners'), who form two-thirds, and adhere to the sacred texts in Sanskrit; and the Tengalai ('southerners'), who form one-third, and have their sacred texts in Tamil. Their mark is a trident on the forehead, the centre line being yellow or red and the two outer ones white. The Tengalai continue the central line of the trident in white for some distance down the nose. The Bhāgavatas are probably a very ancient sect. They are classed with Smārtas, but chiefly worship Vishnu, and wear Vaishnava perpendicular marks. Nearly all the Brāhmans in Mysore belong to the Pancha Drāvida or 'five tribes of the south.'

The Sātāni (22,378) are the next most numerous religious sect. They are regarded as priests by the Holeya and other inferior castes, and themselves have the chiefs of the Srīvaishnava Brāhmans and Sannyāsis as their *gurūs*. They are votaries of Vishnu, especially in the form of Krishna, and are followers of Chaitanya. As a rule they are engaged in the service of Vaishnava temples, and are flower-gatherers, torch-bearers, and strolling musicians. They call themselves Vaishnavas, the Baisnabs of Bengal.

Of Musalmāns the majority are Sunnis, very few being Shiahs. There are thirteen Musalmān classes, the most numerous of which are Shaikh (178,625), Saiyid (42,468), Pathān (41,156), Mughal (8,241), Labbai (6,908), and Pinjari (4,558). The first four are mostly in the army, police, and other Government service, but many are merchants

and traders. The Labbai are descendants of Arabs and women of the country. They come from Negapatam and other parts of the Coromandel coast, and speak Tamil. They are an enterprising class of traders, settled in most of the towns, vendors of hardware and other articles, collectors of hides, and traders in coffee; but they take up any lucrative business. Some are settled as agriculturists at Gargeswari in Mysore District. The Māppilla or Moplah are of similar origin but from the Malabar coast, and speak Malayālam. They are principally on the coffee plantations in the west. At one time there were many at the Kolār gold-mines. The Pinjari are cotton-ginners and cleaners; other Musalmāns as a rule have no intercourse with them. At Channapatna and one or two other places is a sect called Daire, who came originally from Hyderābād. They believe the Mahdi to have come and gone, and do not intermarry with other Musalmāns. They trade in silk with the West Coast.

Christians at the Census of 1901 numbered 50,059: namely, Europeans, 4,753; Eurasians, 5,721; and native Christians, 39,585. The first two classes are mostly in Bangalore and the Kolār Gold Fields, but they are also scattered in various parts of the country. European coffee-planters reside in Kadūr and Hassan Districts. The principal Eurasian rural settlement is Whitefield in Bangalore District. The same District and the Kolār Gold Fields contain the largest number of native Christians. They have increased by 41·6 per cent. since 1891, or, excluding the Civil and Military Station of Bangalore, by 62·8 per cent. The following were the principal denominations returned:—

Denomination.	Europeans.	Eurasians.	Natives.	Total.
Roman Catholic . .	1,095	2,834	33,687	37,616
Anglican . . .	2,911	2,280	2,606	7,797
Methodist . . .	437	391	1,816	2,644

The Roman Catholics increased by 29 per cent. in the decade. As regards the Anglicans and Methodists, it appears that some belonging to the latter denomination entered themselves merely as Protestants, and were thereby included among the former. Putting both together, to rectify the error in some degree, the increase was 25·3 per cent. The Methodists include Wesleyans and American Methodist Episcopalians. The Roman Catholic diocese of Mysore extends over Mysore, Coorg, Wynaad, Hosūr, and Kollegāl. The Bishop resides at Bangalore. The Anglican churches are in the diocese of the Bishop of Madras.

Of Christian missions to Mysore, the oldest by far was the Roman Catholic. So far back as 1325 the Dominicans are said to have commenced work in the Hoysala kingdom. In 1400 they built a church

at Anekal[1]. The Vijayanagar Dīwān in 1445 is said to have been a Christian, and also the viceroy at Seringapatam in 1520. In 1587 the Franciscans arrived on the scene. But it was not till the middle of the seventeenth century that mission work was firmly established. At that period some Jesuit priests from Coimbatore founded the Kanarese Mission at Satyamangalam, Seringapatam, and other places in the south. In 1702 two French Jesuits from Vellore founded a Telugu mission in the east, building chapels at Bangalore, Devanhalli, Chik-Ballāpur, and other places. The suppression of the Jesuit Order in 1773 was a severe check; and in the time of Tipū all the churches and chapels were razed to the ground, except one at Grāma near Hassan, and one at Seringapatam, the former being preserved by a Muhammadan officer, and the latter defended by the native Christian troops under their commander. After the fall of Seringapatam in 1799 the work was taken up by the Foreign Missions Society of Paris, and the Abbé Dubois, who was in the south, was invited to Seringapatam by the Roman Catholics. He laboured in Mysore for twenty-two years, adopting the native dress and mode of living. He was highly respected by the people, who treated him as a Brāhman, and he became well-known from his work on *Hindu Manners, &c.*, the manuscript of which was bought by the British Government[2]. He was the founder of the church at Mysore, and of the Christian agricultural community of Sathalli near Hassan, and is said to have introduced vaccination into the State. The East India Company gave him a pension, and he died in France in 1848 at the age of eighty-three. In 1846 a Vicar Apostolic was appointed, and in 1887 Mysore was made a Bishopric. The Roman Catholics have 98 places of worship in the State. At Bangalore they maintain a high-grade college and college classes for girls, a convent with schools, a well-equipped hospital, orphanages and Magdalen asylum, and a Home for the Aged under the Little Sisters of the Poor; and at Mysore there are a convent and various schools. Agricultural farms for famine orphans have been formed in the *tāluks* bordering on Bangalore.

Of Protestant missions the first to the Kanarese people was that at Bellary established by the London Missionary Society, which in 1820 was extended to Bangalore. The first dictionaries of the language, and the first translation of the Bible into the vernacular, together with the first casting of Kanarese type for their publication, were the work of this mission. They were also the pioneers of native female education, in 1840. They have Kanarese and Tamil churches at Bangalore,

[1] An old inscription, surmounted by a cross, has been found there relating to the *kumbāra ane* or potters' dam.

[2] The best and most authentic edition of this work was published at Oxford in 1897, edited by the late H. K. Beauchamp.

a high school, and various schools for girls. The out-stations are to the east and north of Bangalore, the chief being at Chik-Ballāpur. The Wesleyan Mission began work in 1822, but only in Tamil, in the cantonment of Bangalore. Their Kanarese mission was commenced in 1835. In 1848 a great impetus was given to the publication of vernacular literature by their establishment of a printing press at Bangalore, and the vast improvements introduced in Kanarese type. The mission has now about forty circuits in Bangalore, Mysore, and the principal towns, with high schools at those cities, and numerous vernacular schools all over the country, besides hospitals for women and children at Mysore and Hassan. They also have some industrial schools, and issue a Kanarese newspaper and magazine. The Church of England has a native S.P.G. mission at Bangalore, taken over in 1826 from the Danish Lutherans, by whom it had been begun a few years earlier; and the Zanāna Mission of the Church has a large Gosha hospital (for women) there, with a branch hospital at Channapatna, and a station at Mysore city. The American Methodist Episcopal Church began work in 1880, and has places of worship and schools in Bangalore, chiefly for Eurasians, and a native industrial school at Kolār. A Leipzig Lutheran mission was established at Bangalore on a small scale in 1873; and there is a small Faith mission at Malavalli in Mysore District.

The occupations of the people have been returned under eight main classes. Of these the most important are: pasture and agriculture, which support 68 per cent. of the population; preparation and supply of material substances, 11 per cent.; and unskilled labour not agricultural, 9 per cent. Actual workers number 1,875,371 (males 1,485,313, females 390,058), and dependents number 3,664,028 (males 1,311,711, females 2,352,317).

Rāgi (*Eleusine coracana*) is the staple food of all the lower orders and labouring classes. The flour is made into a kind of pudding called *hittu*, and into cakes, which are fried in oil. Of other millets, *jola* (*Sorghum vulgare*) is the most commonly eaten, especially in the north. Puddings and cakes are made of the flour, and it is also boiled whole to eat with curry. Of pulses, *avare* (*Dolichos Lablab*) is the favourite, and is used in curries. Rice (*Oryza sativa*) of many varieties is the principal food of Brāhmans and the higher classes.

White or coloured cotton stuffs of stout texture supply the principal dress of the people, with a woollen *kambli* or blanket as an outer covering for the night or a protection against cold or damp. Brāhmans go bare-headed, the head being shaved all except the tuft at the crown, and most Hindus observe the same practice. The moustache is the only hair worn on the face. The *dhotra*, a thin sheet, covers the lower limbs, one end being gathered into folds in front and the other

passed between the legs and tucked in at the waist behind. A similar garment is thrown over the shoulders. A bright magenta worsted cap and a scarlet, green, or blue blanket are often worn in the early morning or on a journey. At office, Brāhmans wear a turban and a long coat, either woollen or cotton. Students wear a sort of smoking-cap instead of a turban. The ryots are generally content with a turban and a *kambli*, with commonly a short pair of drawers. When not at work they often wear a blouse or short smock-frock.

The dress of the women is graceful and becoming. A tight-fitting short bodice is universally worn, leaving the arms, neck, throat, and middle bare, the two ends being tied in a knot in front. It is generally of a gay colour, or variegated with borders and gussets of contrasting tints, which set off the figure to advantage. In the colder tracts, to the west, a somewhat loose jacket, covering all the upper part of the body and the arms, is worn instead. The *shīre* or *sārī*, a long sheet, ordinarily dark blue or a dull red with yellow borders, is wrapped round the lower part of the body, coming down to the ankles. One end is gathered into a large bunch of folds in front, while the other, passed across the bosom and over the head, hangs freely over the right shoulder. In the west it is tied there in a knot. Brāhman women pass the lower end of the cloth between the legs and tuck it in at the waist behind, which leaves the limbs more free. Their heads too are not covered, the hair being gathered into one large plait, which hangs straight down the back, very effectively decorated at the crown and at different points with richly chased circular golden cauls or bosses. Vaisya women are similarly dressed, but often with less good taste. They smear themselves with saffron to produce a fair or yellow tint, and not only on their cheeks but also over their arms and legs. This practice, so common among the trading class, is by no means attractive, nor is the habit of blackening the teeth, adopted by married women, more pleasing to European ideas. Many fair women are elaborately tattooed on the arms. Sūdra women generally gather the hair into a chignon or bunch behind, stuffed out with a bunch of wool, and run a large pin through, with an ornamental silver head, which is rather becoming. In the Malnād the women often arrange the back hair in a very picturesque manner, with a plait of the cream-white *ketaki* flower (*Pandanus odoratissimus*), or with orchid blossoms or pink cluster-roses. Ornaments are commonly worn by all classes in the ears and nose, and on the arms, with rings on the fingers and toes, and as many and costly necklets and chains round the neck as means will allow. Chains frequently connect the upper rim of the ear with the ornamental pin in the back hair, and have a pretty effect. The richer Brāhman and other girls wear silver anklets, often of a very ponderous make, which are by no means elegant. A silver zone

clasped in front is a common article of attire among all but the poorer women, and gives a pleasing finish to the costume. The only marked difference is in the dress of Lambāni women, already described in treating of them.

In Manjarābād the dress of the headmen is usually a black *kambli* or blanket, passed round the body and fastened over the left shoulder, leaving the right arm free. The waist is girded with a similar article, or with a cloth, generally dark blue with a white stripe. The turbans are mostly white, or dark blue with a narrow gold edging. The labourers have a similar dress of coarser material, and usually wear a leathern skull-cap. All classes carry a big knife, fastened to the girdle behind.

The dress of Muhammadan males differs from that of the Hindus chiefly in cut and colour, and in the wearing of long loose drawers. But for undress a piece of dark plaided stuff is worn like the *dhotra*. They shave the head completely, but retain all the hair of the face. A skull-cap is worn, over which the turban is tied in full dress. The women wear a coloured petticoat and bodice, with a large white sheet enveloping the head and the whole person, and pulled also over the face.

The higher caste Hindus wear leathern slippers, curled up at the toe and turned down at the heel; the labouring classes wear heavy sandals, with wooden or leathern soles and leathern straps. Muhammadans also wear the slipper, but smaller, and frequently a very substantial big shoe, covering the whole foot. Women are never shod, except occasionally on a journey, or in very stony places, when they sometimes wear sandals.

Religious mendicants appear in a variety of grotesque and harlequin costumes, with hair unshorn. But garments dyed with red ochre or saffron are the commonest indications of a sacred calling.

The dwellings of the people are generally of mud, one-storeyed and low, with few, if any, openings outwards except the door, but possessed of courtyards within, surrounded with verandas and open to the sky. In the better class of houses these are well paved and drained, while the wooden pillars are elaborately carved or painted. The huts of the outcaste and poorer classes are thatched; but the houses of the higher orders are covered with either terraced or tiled roofs, the latter more especially in the west, where the rainfall is heavy.

Animal fights, between rams, cocks, and quails, are popular. Companies of tumblers, jugglers, snake-charmers, &c., wander about and earn a living. Theatrical performances are also well patronized. In the south they take place in the open at a certain season in all the large villages, the performers being the villagers themselves. The Hindu festivals most generally observed by all sects are the Holi and

the Dasara, which respectively mark the seasons of the vernal and autumnal equinox; the Pongal, at the time of the winter solstice, a sort of harvest festival; the Dīpāvali or feast of lights; and the Yugādi or new year's day. The Sivarātri, or watch-night of fasting, is kept by all adherents of Siva. The Muhammadans keep the Ramzān, when thirty days of abstinence are observed, and also the Muharram, properly a season of lamentation, but generally kept here as a festival. Their other principal public feasts are the Bakr-Īd and Shab-i-barāt.

Among respectable Hindus a man generally has three names—the first being that of his village or the place of origin of his family; the second his personal name; and the third that of his caste or sect. It is a common custom to name the eldest son after his paternal grandfather, and the next after his maternal grandfather, but only if they are dead. If they are living, then after the great-uncle or other corresponding near relative who is dead. Girls are similarly named after the female grandparents, &c. But if a child was born in response to a religious vow, it is named after the god who is supposed to have granted it. Muhammadans are named after the apostle under whose star they are born, or from one of the ninety-nine sacred names, to which is added the sect. Girls are named after the wives or female relatives of the apostles.

Agriculture.

Agriculture is chiefly dependent on the rains. If they are sufficient and seasonable, it prospers; but such a favourable conjuncture is only occasional. 'Wet crops' irrigated from river channels or perennial wells, and products of the self-sustaining black soil, are therefore least affected by vicissitudes of the seasons.

The soils in Mysore vary from black cotton to light sandy loam. A red-coloured loam, or clay loam, predominates. Differing from other soils of India, they are generally deficient in phosphoric acid, most of them containing less than 0·1 per cent. and the average containing barely 0·05 per cent. The percentage of potash is much higher, averaging three or four times that of phosphoric acid. In the hilly virgin-forest region in the west of the State, where coffee is largely grown, the percentage of nitrogen is very high, averaging more than 0·2 per cent. in the surface soil and nearly 0·15 per cent. in the second foot. In the eastern portion of the State, where the land has been cultivated a long time, less nitrogen is found. The surface is generally undulating (though flat in some parts and very hilly in others), here and there broken up by rocky hills and gravelly ridges. The annual rainfall varies from about 200 inches in the Western Ghāts to about 25 or 30 inches in the eastern part of the State. Excepting rice, coffee, cardamoms, pepper, areca-nut, and betel-leaf, very little cultivation is carried on in the forest region of heavy rainfall in the

extreme west. The other part of the State, with a rainfall varying from about 20 to 60 inches, grows principally *rāgi*, *jola*, various pulses and oil plants on the 'dry' lands, with cotton and tobacco in some localities, and principally rice and sugar-cane on the irrigated fields[1].

The population engaged in and dependent on agriculture, according to the Census of 1901, is 3,657,462, or 66 per cent. of the total. Of these, 951,056 males and 179,876 females are actual workers, and 941,867 males and 1,584,663 females are dependents.

The staple food-grains are: *rāgi* (*Eleusine coracana*), rice (*Oryza sativa*), *jola* (*Sorghum vulgare*), other millets (*Panicum*), gram (*Dolichos biflorus*), and other pulses. Oilseeds include gingelly (*Sesamum*) and castor (*Ricinus*); the chief fibres are cotton and *san*-hemp; among spices may be mentioned chilli or capsicum, ginger, coriander, cumin seed, &c.; and among miscellaneous crops—tobacco, mustard, onions, garlic, &c.

The months for sowing the principal crops are June and July, and November is the general harvest time; but the pulses *avare* and *togari*, which are sown along with *rāgi*, ripen two or three months later. Horse-gram is sown in October or November, and ripens in three months. Of rice there are two crops, the Kārtika *fasal*, or *kār*, maturing in October or November, and the Vaisākha *fasal*, or *hain*, maturing in April or May. The ordinary sugar-cane is planted about April and takes twelve months to mature. Other kinds are planted in August or February, and require fourteen months. Cotton is sown in June and ripens in six months, continuing to yield for four months, and the second year's crop is better.

Kumri or shifting forest cultivation is practised only by wild hill tribes in the west and south, and is permitted in some parts under certain restrictions. Under this system jungle is burnt down and seed planted in the ashes.

Agricultural implements in general are such as have been in use for ages. The principal new appliance that has been to some extent adopted is an iron mill for expressing the juice of the sugar-cane, which has in many parts replaced the old cumbrous apparatus.

Fruit and vegetable production has received special attention in the neighbourhood of Bangalore. Apples, strawberries, potatoes, peas, and cauliflowers may be mentioned among European products that are well established. Of native fruits, the grafted mango is largely cultivated. Areca-nuts, coco-nuts, and plantains are general in irrigated land. The best areca-nuts are a special production of Nagar and the moist west. Coco-nuts are grown without irrigation in the central parts of the State, and the dried kernels are an article of export. A horticultural garden

[1] This paragraph was contributed by Dr. A. Lehmann, Agricultural Chemist to the Government of Mysore.

is maintained by the State in the Lāl Bāgh at Bangalore, and an exotic fruit garden at Nandidroog. Native florists do a good business in plants.

To the Agricultural department are attached an agricultural chemist, with assistants, a mycologist, and an entomologist. A well-equipped chemical laboratory has been fitted up at Bangalore, where analyses are made of soils, of the composition of manures and fertilizers, of the quality of special products like coffee, and of roots, bulbs, and other wild edibles that may be of use as food in time of famine. Prevalent insect pests and plant diseases are investigated with a view to devising remedies. Plot experiments are being conducted in the cultivation of sugar-cane, *rāgi*, sweet potatoes, and ground-nuts. A plant-house for pot culture is being erected. An experimental farm has been formed near Bangalore, where 'wet' and 'dry crops' are being raised. In the Lāl Bāgh garden at Bangalore rubber, fibre, and cotton plants are receiving attention. At the Kunigal stud farm special kinds of rice are being tried. Arrangements have been made for imparting instruction in practical agriculture at the normal school in Mysore and at eight other State schools, and in sericulture at Mr. Tata's silk farm in Bangalore. Moreover, a few model holdings in each *tāluk* are being selected by the *amaldārs*, belonging to intelligent tenants who are willing to cultivate them on improved methods according to expert advice. Agricultural shows are to be held at the District head-quarters and prizes awarded by the State.

Loans for land improvement during the thirteen years ending 1903–4 amounted to a total of 1.6 lakhs. In the same period 7.1 lakhs was also advanced for 3,068 irrigation wells, of which 2,212 were completed. For *sāguvali kattes* or cultivation embankments Rs. 11,000 was advanced.

There were fifty-nine agricultural banks in 1904, of which twenty-one were reported to be working satisfactorily, but taken altogether they have not been a success. Two banks intended for the benefit of native coffee-planters had received loans up to nearly 9 lakhs, of which more than 3½ lakhs was outstanding. They have since been closed, and individual contracts for repayment made with the estates which had received loans. The advances to the remaining banks had amounted to 7½ lakhs, of which 1 lakh was recovered. Owing to lax management thirteen banks have had the advances made to them recalled. The loans granted by the banks, exclusive of renewals, amounted to 10¾ lakhs, of which 7 lakhs was used to liquidate previous debts, and the rest for agricultural purposes. The balance due to the State in 1904 for loans and interest was 13 lakhs.

The cultivators are for the most part in debt, but not heavily, their liabilities generally ranging between Rs. 50 and Rs. 100. In villages

the creditors are, as a rule, themselves agriculturists, but in towns they are more often money-lenders. The rate of interest on private loans to agriculturists varies. In some places in the Malnād the rate till recently ranged between 24 and 36 per cent. In other tracts it used to be 18 per cent. The rate is now everywhere lower, the minimum being 12 and the maximum 18 per cent. A Co-operative Societies Regulation was passed in 1905, from which good is anticipated.

STATISTICS OF AGRICULTURE

(Areas in square miles)

	Average, 1881–90.	Average, 1891–1900.	1900–1.	1903–4.
Total area shown in village papers	...	...	27,248	27,270
Total uncultivated area	17,404	19,706	18,057	17,588
Cultivable but not cultivated	4,700	2,891	4,321	3,871
Uncultivable	12,704	11,155	13,736	13,717
Total cultivated area	8,261	8,978	9,191	9,682
Irrigated from canals	...	137*	166	175
,, ,, wells and tanks	...	773*	878	992
,, ,, other sources	...	347*	314	406
Total irrigated area	1,100	1,497	1,358	1,573
Unirrigated area	4,644	7,331	7,833	8,109
Cropped area.				
Rāgi	...	3,746	3,293	3,499
Rice	945	1,107	1,118	1,239
Other food-grains and pulses	5,548†	2,897	3,682	3,752
Oilseeds	280	458	516	543
Sugar-cane	45	50	64	65
Cotton	56	87	71	109
Other fibres	4	10	37	18
Coffee	203	209	199	195
Tobacco	36	22	21	26
Miscellaneous	291	453	581	627
Total area cropped	7,408	9,039	9,582	10,073
Area double cropped	...	237	391	391

NOTE.—The principal crops raised by means of irrigation are rice, sugar-cane, and wheat. * Only nine years' average. † Includes *rāgi*.

The Amrit Mahāl is the principal cattle-breeding establishment. Its head-quarters are at Hunsūr, and grazing-grounds called *kāvals* are reserved for its use in different parts of the country. In 1903–4, with 9,686 head of cattle, the births were 42·5 per cent. on the average number of breeding cows, and the deaths 9·3 per cent. on the total stock. The sales, including 150 young bullocks to the Madras Transport Dépôt at the usual rate of Rs. 50 each, realized an average of Rs. 36 per head. Amrit Mahāl bullocks are famed for their pluck and endurance, being as superior to others as thoroughbreds among horses. The best breed is the Hallikār. The ordinary cattle are of the Mādesvaran-betta and Kānkānhalli breeds, both named from places in the south-east of the State. Amrit Mahāl bulls are stationed by

Government in various parts for improving the breed of cattle used by the ryots. Six Amrit Mahāl cows were sent to the Chin Hills in Northern Burma to be crossed with *mithan* bulls (*Bos frontalis*). Large cattle fairs are held at Nandi, at the *ghāt* north of Dod-Ballāpur, at Santemāranhalli, and other places. An ordinary pair of plough bullocks costs from Rs. 30 to Rs. 50 or more; superior trotting and draught-bullocks, Rs. 70 to Rs. 200 or more. Buffaloes are extensively used for supplying milk, and for carrying manure and ploughing in heavy land.

Sheep and goats were kept on farms under the Amrit Mahāl *dārogas*. In 1902, with 1,694 head, there were 308 births and 294 deaths. Owing to similar poor results over a series of years, the flocks were then sold, only 257 sheep of Australian and Kashmīr breeds being retained. The ordinary country sheep are the Kurubar. They are shorn twice a year, and the wool is made into rough *kamblis*. Fine fighting rams are produced. Sheep are folded on fields for the sake of their dung, which is highly valued.

The stud farm is at Kunigal. In 1904 there were five stallions, 81 brood mares, and 200 foals, of which 35 were born in the year. Good native cavalry remounts are produced. From Kāthiāwār three wild asses (*Equus hemionus*) were obtained in order to breed a larger type of donkeys in the State, and for mule-breeding, for which there is a farm near Devanhalli.

The principal cattle diseases are anthrax, foot-and-mouth disease, malignant catarrh, and lung diseases. Rinderpest has also been known. There is a civil veterinary officer only for Bangalore; but the natives have their own remedies and methods of treatment, among which cautery or branding with hot iron is very common.

The sources of irrigation are channels drawn from dams on the rivers, besides tanks and wells. The most important of the river channels are in the south of the State, connected with the CAUVERY and its tributaries. Most of them were originally constructed centuries ago, but have been improved and extended. The water is let out according to the needs of the rice or sugar-cane crops, and confined to the proper seasons for them. To put an end to complaints of unequal distribution, the management of the river channels in the irrigation season was in 1888 put under the *amaldārs* of the *tāluks* through which they run, and the hot-season supply to sugar-cane and garden tracts was arranged to be given at fixed periods, in consultation with the Deputy-Commissioners concerned. There is no separate water rate, but the fixed assessment includes the full value imparted by soil and water combined. The value of the channel water-supply is determined on the basis of quantity, duration, and facility, according to the established capacity of each channel. The supply of water from tanks is similarly regulated. The receipts from river-fed channels in 1903–4

amounted to $6\frac{1}{2}$ lakhs, and the net profits to 5 lakhs. The best wells are those throughout the north-east, fed by *talpargis* or spring-heads. The water is raised by either the *yāta* or the *kapile*. The former, also known as *picottah*, is a lever with an iron bucket attached at the water end by a bamboo rod. The lever is weighted at one end with stones, or else raised and depressed by a man standing on it near the fulcrum post. The *kapile* has an inclined plane or ramp, down which bullocks draw a stout rope attached to a large leathern bucket.

A very large irrigation work is under construction at Māri Kanave on the Vedāvati. Other prominent recent works for the same purpose are Bora Kanave, Māvatūr tank, Srīnivāsa Sāgara, &c. Various projects in different tracts have been examined.

Rent, wages, and prices.

The general system of land tenure is *ryotwāri*, under which small separate holdings are held direct from government. There is also a certain number of *inām* tenures, which are wholly or partially revenue free. In 1904 there were 965,440 *ryotwāri* holdings, with an average area of 7·11 acres, and an average assessment of Rs. 9-6-1. The *inām* holdings numbered 84,548, with an average area of 20·8 acres, and an average assessment of Rs. 6-5-0. A special class are the lease-holders of gold-mines, whose holdings numbered 44, with an average area in each estate of 912·5 acres, assessed at an average of Rs. 439-6-7.

The sum payable by the cultivator, which is revenue rather than rent, is determined mainly by the class of soil and kind of cultivation. After the revenue survey, the settlement of this point is effected on the following system. Nine classes of soil are recognized, and all the land is divided into 'dry,' 'wet,' and 'garden' land. In the two latter, in addition to soil classification, the water-supply is taken into consideration, and its degree of permanency or otherwise regulates the class to which it is referred. In the case of gardens irrigated by wells, in addition to the classification of soil, the area of land under each, and the distance of the garden from the village, as affecting the cost of manuring, &c., are carefully ascertained. Villages are grouped according to their respective advantages of climate, markets, communications, and the agricultural skill and actual condition of the cultivators. The maximum rates for each class of cultivation are then determined by reference to the nature and effects of past management of the *tāluk* for twenty years, and by examination and comparison of the annual settlements of previous years. These having been fixed, the inferior rates are at once deduced from the relative values laid down in the classification scales.

Of measures intended to improve the position of the cultivators and to relieve them from indebtedness, one of the principal has

been the collection of revenue in instalments at such times as enable the cultivator to sell his crop first. There is also the recent Co-operative Societies Regulation. Taking the natural divisions of east and west, the average rate per acre in the former in 1904 was Rs. 1–7–3, the maximum and minimum being Rs. 2–1–11 and R. 0–10–8; in the latter, the average was Rs. 1–13–1, the maximum and minimum being Rs. 1–14–1 and Rs. 1–12–5. The *batai* system, or payment of revenue by division of the crop, which formerly prevailed, has been entirely replaced by cash rates.

The daily wages for skilled labour vary in different parts from 6 annas to Rs. 1–8, and for unskilled labour from 2 annas to 8 annas. While the latter has remained at about the same figure as regards the minimum, with a tendency to rise, the former has increased in the last twenty years from 50 to 100 per cent. Payment in kind is becoming less common, probably owing to the influence of railways, mining and other industries, and large public works, the labourer being less tied down to single localities, and having greater facilities to travel at a cheap rate.

The following table relating to the staple food-grains and salt shows that there has been a general rise in prices, except in the case of salt, which is cheaper:—

Prices (seers per rupee).		In 1880.	Average for 10 years ending 1890.	Average for 10 years ending 1900.
Rāgi	East	40.84	36.25	30.40
	West		34.38	33.23
Rice (common)	East	15.4	13.63	10.60
	West		14.61	11.66
Jola	East	...	...	24.53
	West			24.28
Gram (Bengal)	East	14.46	13.51	11.29
	West		14.59	11.72
Salt	East	8.98	10.42	10.00
	West		10.06	

Taking five-year periods from 1876, the percentage of increase in the retail prices of these grains on those for 1871–5 at the central marts of Bangalore and Mysore is shown in the following table:—

	Bangalore.				Mysore.			
	Rāgi.	Rice.	*Jola.*	Gram.	*Rāgi.*	Rice.	*Jola.*	Gram.
1876–80	99	45	41	40	123	40	94	65
1881–5	19	21	–12	–20	56	2	31	1
1886–90	9	26	– 5	96	25	3	5	136
1891–5	44	58	10	115	68	35	51	173
1896–1900	79	55	30	149	107	34	74	210

The initial increase was due to the famine of 1876–8. A great drop succeeded till 1895, owing at first to good seasons and diminished population, and later to freer means of communication also. In the last period prices have been rising, owing probably both to short crops locally and to the demand from famine-stricken parts elsewhere, especially in Western India.

The general condition of the people has been steadily improving since the middle of the last century, and has made special progress in the past thirty years, as shown by the rise in both wages and prices, and in the standard of living. A moderate assessment has relieved the cultivators, while the easy means of communication provided by roads and railways, together with freer postal facilities, have stimulated the enterprise of traders and benefited all classes. The prosecution of extensive public works has given labourers and artisans ready employment, and public servants have had exceptional opportunities of rising to good positions. On the other hand, there have been bad seasons in certain years, and in 1876–8 a great famine. Coffee-planting has been almost ruined by the fall in prices. Cardamoms have suffered from the same cause, and areca-nuts have been injured on a large scale by disease. Plague has also in recent years interfered greatly with the well-being of the people. But education and medical aid are now brought to the doors of all classes, and in important centres the population are better housed, better clothed, and better fed than in the generations past.

Forests.

The area of State forests, which are 'reserved' and are under a Conservator of Forests, was 2,094 square miles in 1904, besides about 1,400 square miles of Ghāt forests and *kāns*. The unreserved or District forests, which are under the revenue authorities, covered 612 square miles. The forests may be divided into evergreen and deciduous. The evergreen forests are confined to the Western Ghāts and the country below them on the east, extending from the north of Sāgar to the south of Manjarābād, in a belt from 6 to 14 miles wide. On all sides may be seen magnificent trees with clear stems of 80 to 100 feet to the first branch. Poon-spar (*Calophyllum tomentosum*), ebony (*Diospyros Ebenum*), and wild jack (*Artocarpus hirsuta*) are some of the trees. East of this is a mixed belt, from 10 to 45 miles wide, extending from the north of Sorab to the south of Gundalpet. It contains the finest timber-producing forests, and is bordered on the east with much sandal-wood. It also comprises the best areca-nut and cardamom gardens, and the coffee plantations of Koppa and Manjarābād. Its junction with the evergreen belt on the west is marked by splendid *nandi* (*Lagerstroemia lanceolata*) and black-wood (*Dalbergia latifolia*). Teak, satin-wood, *sissu*, ironwood, and other trees abound in it, as

well as bamboo. East again is the dry belt, covering the greater part of the State. Many of the trees found in the mixed belt recur here, but they are smaller, and the tree vegetation is generally inferior. Besides different kinds of *Ficus*, the mango, tamarind, and *jāmun*, the *ippe* (*Bassia latifolia*), and jack (*Artocarpus integrifolia*) grow well here. Acacias, the wood-apple, *bael*-tree, and *honge* (*Pongamia glabra*) also thrive. The bastard date-palm (*Phoenix sylvestris*) grows in the western part, and the dwarf date-palm (*Phoenix farinifera*) in the centre and west.

There are twelve kinds of 'reserved' trees: sandal-wood (*Santalum album*), teak (*Tectona grandis*), poon (*Calophyllum tomentosum*), blackwood (*Dalbergia latifolia*), *honne* (*Pterocarpus Marsupium*), *lac* or *jālāri* (*Vatica laccifera*), *nandi* (*Lagerstroemia lanceolata*), wild jack or *hesswa* (*Artocarpus hirsuta*), *kārāchi* or *kammar* (*Hardwickia binata*), *bili matti* (*Terminalia Arjuna*), *kari matti* (*Terminalia tomentosa*), and ebony (*Diospyros Ebenum*).

The principal articles of minor forest produce are gall-nuts, tanning bark from *tangadi* (*Cassia auriculata*), and lac. Also soap-nuts, gum, honey, beeswax, &c.

Elephants are employed in dragging timber from inaccessible places, and logs are floated down the western streams and channels. Large-sized timber is sold at the regular timber dépôts, and small-sized timber at temporary dépôts opened in convenient places. Bamboos are cut by licence. Sandal-wood, which is a State monopoly and the principal item of forest revenue, is sold at the various sandal-wood dépôts.

Fuel reserves are formed in the District forests, and by special plantations, often of casuarina. Local needs are also provided for by the formation of village forests. Grazing is permitted to a certain extent on a system of licences; but in times of scarcity the State forests are thrown open where necessary.

Working-plans are being prepared for all the most important forests. Fire preventive measures have been extended over 1,823 square miles, of which 1,653 were successfully protected in 1903-4.

The forest revenue, expenditure, and surplus have been as follows:—

	Average, 1882-90.	Average, 1891-1900.	1900-1.	1903-4.
	Rs.	Rs.	Rs.	Rs.
Revenue . .	8,96,847	13,27,064	12,48,083	15,90,761
Expenditure .	3,16,215	5,26,374	3,78,222	5,18,121
Surplus . .	5,80,632	8,00,690	8,69,861	10,72,640

Gold is the only mineral raised from mines. These were being worked by thirteen companies in 1904, of which five paid dividends,

three produced gold but paid no dividend, and the rest were non-producers. All but three, which are included in the non-producing class, belong to the Kolār Gold Fields. The ore is treated by milling and amalgamation, and the tailings by cyanide. Steam power has been replaced since June, 1902, by electric power, generated at the Cauvery Falls, 92 miles distant. The number of persons employed in the industry in 1903 was 27,355. Of these, 76 per cent. were Hindus, 18 per cent. Christians, and 6 per cent. Muhammadans. The great majority of the Hindus were Holeyas, the others being mostly Wokkaligas, Tigalas, and Woddas. The Christians consisted of 17 per cent. Europeans, 22 per cent. Eurasians, and 61 per cent. natives. The amount paid in wages was 70·3 lakhs, which gives an average earning of Rs. 257 per head per annum. The five dividend-paying companies are the Mysore, Champion Reef, Ooregum, Nundydroog, and Balaghat. The nominal capital of all the companies was £2,958,500, and the paid-up capital £2,683,000. All the gold produced is dispatched to England. Minerals as yet unworked in the State include a small quantity of asbestos. Iron is smelted in several places. Some manganese has lately been exported from Shimoga District.

Mines and minerals.

QUANTITY AND VALUE OF MINERALS PRODUCED

Minerals.	1891.		1901.		1904.	
	Weight.	Value.	Weight.	Value.	Weight.	Value.
		Rs.		Rs.		Rs.
Gold . oz.	109,643	55,77,930	530,142	1,92,30,810	607,574	2,32,31,830
Iron . tons	573	30,000	*129	26,120	346	26,530
Corundum ,,	11	666	82	5,352	745	...
Mica . ,,	...	...	3	240	...	...
Salt . ,,	...	...	494	30,517	855	65,284
Limestone ,,	...	...	29,062	1,02,189	25,085	2,52,921

* Also iron ore, 743 tons.

For cotton-weaving the loom is placed over a kind of well or hole, large enough to contain the lower portion of the machinery, which is worked on the pedal principle with the toes, the weaver sitting with his legs in a hole. The combs are supported by ropes attached to beams in the roof, working over pulleys, and stretching down into the well to the toes of the weaver. In his right hand is the shuttle, which contains the thread, and which, passed rapidly through the spaces created by the combs, forms the pattern. The principal comb is held in the left hand. As the cloth is manufactured, it is wound on the beam by slightly easing the rope on the right hand and turning round the lever. In addition to cotton stuffs used for clothing, the

Arts and manufactures.

principal fabrics made are tape for bedsteads, carpets or rugs, tent cloth, cordage, &c. Steps have recently been taken to introduce the fly-shuttle; and six weaving-schools for instruction in its use have been established at Hole-Narsipur, Dod-Ballāpur, Chiknāyakanhalli, Molakālmuru, and other places, with carpentry and drawing classes attached.

Silk fabrics of stout texture and excellent designs are made, chiefly by Patvegars and Khattrīs, in Bangalore and Molakālmuru. Women of the wealthier classes are often richly attired in silk cloths on ceremonial or festival occasions. These, with or without gold and silver or gilt lace borders, are largely manufactured at Bangalore; the silk and wire used for the purpose are also produced in the State. Sericulture is extensively carried on in the Closepet, Kānkānhalli, Māgadi, Chik-Ballāpur, Tirumakūdal-Narsipur, and other *tāluks*; but Bangalore is the centre of the silk trade, where raw silk is prepared on a considerable scale for the loom and dyed. There has recently been established here, by the late Mr. J. N. Tata of Bombay, an experimental silk farm under Japanese management for improved systems of silkworm rearing, so as to eliminate disease in the worms by microscopic examination of the seed, and for better reeling. Near Yelahanka is also an improved farm belonging to Mr. Partridge for the scientific rearing of silkworms.

The carpets of Bangalore are well-known for their durable quality, and for having the same pattern on both sides. The old patterns are bold in design and colouring. The pile carpets and rugs made in the Central jail from Persian and Turkish designs are probably superior to any other in India. Sir George Birdwood says[1]:—

'The stone slab from Koyundjik (palace of Şennacherib), and the door-sill from Khorsabad (palace of Sargon), are palpably copied from carpets, the first of the style of the carpets of Bangalore, and they were probably coloured like carpets. These South Indian carpets, the Masulipatam, derived from the Abbasi-Persian, and the Bangalore, without any trace of the Saracenic or any other modern influence, are both, relatively to their special applications, the noblest designed of any denomination of carpets now made, while the Bangalore carpets are unapproachable by the commercial carpets of any time and place.'

Carpets are less used now, and the industry has declined.

Gold circular or crescent-shaped ornaments worn by women on the hair are called *rāgate*, *kyādige*, and *jede bille*. Ornamental silver pins with a bunch of *chauri* hair for stuffing the chignon or plait are known as *chauri kuppe*. Ear-rings for the upper rim are named *bāvali*; those for the large hole in the lobe, *vōle* or *vāle*. A pear-shaped drop worn on the forehead is called *padaka*. Necklaces include *addike* and

[1] In his splendid book, called *The Termless Antiquity, Historical Continuity, and Integral Identity of the Oriental Manufacture of Sumptuary Carpets*, prepared for the Austro-Hungarian Government.

gundina sara. Bracelets are termed *kankani*; armlets, *vanki*, *nāgamurige*, *tolu tāyiti*, *bandi*, and *bājuband*. A zone is *dābu*. Anklets of silver are *luli*, *ruli*, and *kālsarpani*; little bells for them, worn by children, are *kālu gejje*. Silver toe-rings are called *pilli*. Silver chains worn by men round the waist are known as *udidhāra*. The silver shrine containing the *lingam* worn by Lingāyats is *karadige*. Small silver money-boxes attached to the girdle are named *tāyiti*, while an egg-shaped silver *chunām* box is *sunna kāyi*.

Iron is widely diffused, and is obtained both from ore and from black iron-sand. The principal places where iron is smelted are in the Māgadi, Chiknāyakanhalli, Malavalli, Heggadadevankote, and Arsikere *tāluks*, in the southern and central parts of Chitaldroog District, and in the eastern parts of Shimoga and Kadūr Districts. A steam iron foundry has been established at Bangalore under European management. There are native iron-works at Goribidnūr and Chik-Ballāpur. Sugar-cane mills are made and repaired at Channarāyapatna. The local iron is used for making agricultural tools, ploughshares, tires for cart-wheels, farriery shoes, and so forth. But local manufacture has been driven from the field by the cheaper and better imported articles from Europe, turned out on a large scale with the aid of machinery. Steel of a very high quality can be made; but the methods used are primitive, and it cannot therefore compete with the highly finished European products of the present day, though it is preferred by the natives for the edge of cutting tools. Steel is made especially in the Heggadadevankote, Malavalli, and Maddagiri *tāluks*. Steel wire is drawn at Channapatna for strings of musical instruments, the quality of which makes them sought after throughout Southern India.

The manufacture of brass and copper water and drinking vessels is to a great extent in the hands of the Bhogārs, who are Jains, some of the chief seats of the industry being at Sravana Belgola and Sitakal. Brass is also used for making lamp-stands, musical instruments, and images of the gods; and bell-metal for the bells and gongs used in temples and in religious services, and by mendicants. Hassan and Tumkūr Districts produce the largest number of these articles.

The potter, as a member of the village corporation, is found in all parts, with his wheel and his mounds of clay. The principal articles made are pots for drawing or holding water, large urns for storing grain, pipe tiles, and so forth. For sculpture, potstone or soapstone is the common material; and of this superior cooking vessels are made, besides images of the gods, and various ornamental articles. In the higher departments of sculpture, such as statuary and monumental and decorative carving, Mysore holds a high place. The Jain statue of Gomata at Sravana Belgola, 57 feet high, standing on the summit of a hill which rises to 400 feet, is one of the most remarkable works of native

art in India. The decorative sculpture of the Halebīd and Belūr temples Mr. Fergusson considers to be 'the most marvellous exhibitions of human labour to be found even in the patient East,' and such as he believes never was bestowed on any surface of equal extent in any building in the world. The erection of the new palace at Mysore is affording an opportunity of reviving the artistic skill of the sculptors.

Mysore is famous for its ornamental sandal-wood carving. This is done by a class called Gūdigar, who are settled in Shimoga District, chiefly at Sorab. The designs with which they entirely cover the boxes, desks, and other articles made are of an extremely involved and elaborate pattern, consisting for the most part of intricate interlacing foliage and scroll-work, completely enveloping medallions containing the representation of some Hindu deity or subject of mythology, and here and there relieved by the introduction of animal forms. The details, though in themselves often highly incongruous, are grouped and blended with a skill that seems to be instinctive in the East, and form an exceedingly rich and appropriate ornamentation, decidedly Oriental in style, which leaves not the smallest portion of the surface of the wood untouched. The material is hard, and the minuteness of the work demands the utmost care and patience. Hence the carving of a desk or cabinet involves a labour of many months, and the artists are said to lose their eyesight at a comparatively early age. A number are being employed on work for the new palace at Mysore. Many old Hindu houses contain beautiful specimens of ornamental wood-carving in the frames of doors, and in pillars and beams. The art of inlaying ebony and rosewood with ivory, which seems to have been cultivated by the Muhammadans, and of which the doors of the mausoleum at Seringapatam are good examples, has lately been revived at Mysore, and many useful and ornamental articles, such as tables, desks, album covers, &c., are now made there of this work. Similar inlaying is also met with in choice musical instruments, especially the *vīna* or lute.

Coffee-works at Bangalore, owned by a Madras firm, peel, size, and sort coffee berries in preparation for the European market. During the cleaning season, December to March, about 1,000 hands have been employed, and 1,500 tons of coffee, the produce of Mysore, Coorg, the Nīlgiris, Shevaroys, &c., once passed through the works. The present depression in coffee has reduced these figures to about a fourth. The factory is also engaged in compounding artificial manures for coffee plantations. There are other similar coffee-works at Hunsūr, as well as saw-mills. A Madras firm has a cotton-ginning factory at Dāvangere. A sugar factory has been established at Goribidnūr, and a brick and tile factory at Bangalore, for machine-made bricks and tiles, fire-bricks, drain pipes, &c. Mention has already been made of the iron foundry at Bangalore, and of the silk farm.

The Mysore Spinning and Manufacturing Company at Bangalore was established in 1883, and is under the management of a Bombay Pārsī firm. The nominal capital is Rs. 4,50,000. The mill contains 187 looms and 15,624 spindles, and employs 600 hands. The Bangalore Woollen, Cotton, and Silk Mills Company at Bangalore was established in 1888, and has a capital of Rs. 4,00,000. It contains 14,160 spindles for cotton, and 26 looms and 780 spindles for woollens. The number of hands employed varies from 500 to 600. In 1903-4 the out-turn was 173,000 lb. of grey goods; 52,000 dozen of other goods; and 1,555,000 lb. of yarn.

Oil-mills are at work in Bangalore. Oil-pressing from the various oilseeds grown in the country is the special calling of the class called Gānigas, who are found in all parts of the State. The number of private native mills was returned as 2,712 in 1904. Concessions for the distillation of the valuable sandal-wood oil are granted by the State.

Tanneries on a considerable scale are managed by Muhammadans in Bangalore, where hides are well cured and prepared for export to European markets.

The only breweries are situated in the Civil and Military Station of Bangalore. Three supply the various beer taverns at Bangalore and the Kolār Gold Fields with what is called 'country beer.' The fourth makes a superior beer for the soldiers' canteens in barracks.

Commerce and trade.

The extension of railways and the opening out of roads have greatly increased the facilities for trade. So far as the figures can be relied on, the value of exports is about double that of imports. The most valuable imports are grain and pulse, articles of iron and steel, raw silk, piece-goods, tobacco, and cotton thread. The chief exports, next to gold, are grain and pulse, betel-leaf, areca-nuts, raw silk, sugar and jaggery, coffee, and coco-nuts, chiefly the dried kernels. Among imports, tobacco trebled during the ten years ending 1901. Among exports, while gold increased nearly 100 per cent., coffee fell 44 per cent. The export of sugar and jaggery and of coco-nuts (dry and fresh) doubled, while that of betel-leaf quadrupled.

The principal Hindu trading classes of the country are Banajigas, Komatis, and Nagartas; after whom come the Tamil Mudaliyārs and Musalmāns. The traffic in grain is not entirely in the hands of traders, for the ryots themselves are in the habit of clubbing together and sending off one or two of their number to deal in grain at any convenient market or fair. Apart from the railway, the common mode of carriage and transport is by country carts, the ordinary load of which exceeds half a ton, drawn by bullocks which go 18 to 20 miles a day. But in remote forest tracts and the hills, droves of pack-bullocks and asses are still used, the carriers being generally Lambānis or Korachas.

Trade outside the State, excepting for gold and coffee, which are sent to England, is chiefly confined to the surrounding British Districts. Gold goes via Bombay, coffee generally by way of Mangalore or Marmagao, the producers in both cases being, with hardly an exception, Europeans. The principal trading centres in the State are noted under their respective Districts. A Bangalore Trades Association has been formed, chiefly among the European shopkeepers in the Civil and Military Station.

The following table gives statistics of the total value (in thousands of rupees) of imports and exports. The total value of the rail-borne trade alone is given as—in 1890–1, imports 2·5 crores, exports 2·8 crores; in 1900–1, imports 3·8 crores, exports 3·4 crores. Details are not available.

	Imports.			Exports.		
	1890–1.	1900–1.	1904–5.	1890–1.	1900–1.	1904–5.
Areca-nuts . . .	6,81	5,95	7,42	31,86	31,95	7,95
Betel-leaf . . .	2,32	2,73	1,33	9,72	48,94	5,21
Coco-nuts . . .	12,18	6,56	10,43	6,97	14,63	4,74
Coffee	24,45	2,43	1,22	43,55	19,04	26,83
Cotton, raw . . .	7,87	1,82	2,18	1,95	1,02	50
,, twist and yarn .	11,85	10,22	15,29	6,83	1,26	1,16
,, piece-goods .	40,45	21,42	24,15	68	45	53
,, other manufactures . .	8,55	4,65	9,31	53	97	1,53
Grain and pulse . .	1,07,73	1,09,92	1,97,90	1,64,99	2,56,35	2,03,52
Hides and skins . .	41	35	63	2,00	1,28	4,02
Metals, gold . . .	4,82	3,01	15,03	60,24	2,89,03	3,52,01
,, silver . .	4,10	12,87	12,46	90	2,06	1,70
,, iron . . .	18,02	20,29	13,08	7,11	10	1
Oils	1,75	2,67	4,38	46	59	2,25
Poppy seeds . . .	22	1,64	1,73	9	76	76
Silk, raw . . .	17,39	29,56	19,47	13,91	23,95	17,01
,, manufactured .	2,08	2,37	13,52	3,26	1,21	4,89
Spices	5,19	5,67	2,54	7,44	5,58	8,26
Sugar and jaggery . .	6,59	6,52	5,54	11,52	22,09	27,99
Tobacco . . .	4,94	15,62	7,04	1,18	44	32
All other articles . .	...	1,47,87	55,20	...	1,05,06	19,68
Total	2,87,72	4,14,14	4,19,85	3,75,19	8,26,76	6,90,87

Communications.

The system of railways radiates from Bangalore, and there is no District without a railway running through some part of it. The Bangalore branch of the Madras Railway, standard gauge, runs for $55\frac{1}{2}$ miles in the State, east from Bangalore city to Bowringpet, then south-east to the main line at Jalārpet. From Bowringpet the Kolār Gold Fields branch, 10 miles in length, on the same gauge, runs first east and then south to the end of the Mysore Mine-field. The Southern Mahratta Railway, metre gauge, runs south-west through Mysore to Nanjangūd, and north-west through Harihar

towards Poona, for 312 miles in the State. From Yesvantpur a branch, 51 miles in the State, runs north through Hindupur to Guntakal on the Madras Railway. From Birūr a branch, 38 miles long, runs north-west to Shimoga. Surveys have been made to extend the line from Nanjangūd south-east to Erode on the Madras Railway, and also for a $2\frac{1}{2}$ feet gauge line to the west coast, either from Arsikere to Mangalore, 86 miles in the State, or from Mysore to Tellicherry, 58 miles in the State. The Southern Mahratta Railway Company has proposed a metre-gauge line from Mārikuppam in Kolār District to Dodbele station in Bangalore District, in order to provide direct communication between the Gold Fields and the port of Marmagao; and the survey for it is being made. A light railway on the $2\frac{1}{2}$ feet gauge, from Bangalore north to Chik-Ballāpur, 36 miles, is projected by a private company.

The total length of line open in 1891 was 367 miles, of which $55\frac{1}{2}$ were standard gauge, and the rest metre gauge. In 1904 the total was $466\frac{1}{2}$ miles, the addition being all metre gauge. The Kolār Gold Fields branch is worked by the Madras Railway; the remaining Mysore State lines by the Southern Mahratta Railway on short-term agreements. For the Mysore-Harihar line the Southern Mahratta Railway Company raised a loan on a guarantee of 4 per cent. interest by the Mysore State, which also pays to the company one-fourth of the surplus profits.

The capital outlay on all the lines owned by the Mysore State up to 1904 is 2·3 crores, of which 1·6 crores was incurred on the Mysore-Harihar line. The number of passengers carried in 1903–4 was $2\frac{1}{2}$ millions. The total expenditure was 7·7 lakhs, and the net earnings 7 lakhs. The Kolār Gold Fields and the Bangalore-Hindupur lines were the only two that showed a surplus, after deducting 4 per cent. for interest on the capital outlay.

The railways were expressly designed to serve as a protection against times of scarcity; and since the great famine of 1876–8, when the only railway was the Bangalore branch of the Madras Railway as far as the cantonment, the pressure of severe distress has been averted. Prices have no doubt tended to become equalized. It is not known that any change in the language or customs of the people has arisen from the extension of railways.

Trunk roads run through all the District head-quarters to the frontiers of the State, connecting the east coast and adjoining British Districts by way of the Mysore table-land with the west coast. In 1856 there were 1,597 miles of road in the State. Besides the construction of new roads, improvements in the alignment of old ones, provision of bridges across rivers, and other measures to ensure free transit have since been continuously carried out. A good system of local roads radiates from each District head-quarters to all parts of the

District. The previously almost inaccessible Malnād tracts in the west were the last to benefit, but these were generally opened up by about 1870. Much attention has also been paid to improving the *ghāt* roads through the passes in the mountains to the west. As railways have extended, feeder roads have been made in those parts where none existed.

The old style of carts had a solid wooden wheel. They are known as Wodda carts, and are still employed at quarries for the transport of stone. But for general purposes they have long been superseded by carts with spoked wheels, but without springs. These take a load of over half a ton, and are drawn by a pair of bullocks. In the western parts a broad wain, drawn by several pairs of bullocks, is used for harvesting purposes.

In 1891 there were 1,730 miles of Provincial roads and 3,113 miles of District or Local fund roads. In 1904 the figures were 1,927 miles of Provincial roads, costing for upkeep an average of Rs. 199 per mile; and 3,502 miles of District or Local fund roads, maintained at an average cost of Rs. 72½ per mile.

A steam tramway is proposed for 18 miles from Shimoga for the transport of the manganese ores that are being collected there.

Owing to either rocky or shallow beds, none of the Mysore rivers is navigable, nor are there any other waterways for such use.

The old postal system of Mysore, called the *Anche*, dates from the time of Chikka Deva Rājā in the seventeenth century. In 1889 it was amalgamated with the British postal service and the entire management transferred to that department, on condition of all the official correspondence of the State being carried within the limits of the State free of cost to the Darbār. There is no doubt that the change has been on the whole for the benefit of the public. For postal services Mysore is now a part of the Madras circle. In 1904 there were 428 post offices, and the mails were carried over 2,645 miles. The number of letters delivered was 7 millions, of post-cards 5 millions, of newspapers 650,000, of packets 660,000, and parcels 150,000. The value of money orders issued was 53 lakhs. In the Post Office savings banks 38,586 persons deposited 10·12 lakhs, and 9·18 lakhs was drawn out.

In the Mysore State savings banks there were 20,214 depositors in 1903–4. The opening balance of 73¾ lakhs was raised by deposits (34 lakhs) and interest to 110 lakhs, of which 31 lakhs was paid out in the year, leaving a balance of 79 lakhs at credit of the depositors.

The Mysore State Life Insurance scheme was instituted in 1892, and made obligatory on officials. Up to 1904 there had been issued 7,423 policies, assuring 44½ lakhs. Of this number 6,762 remained effective,

assuring 40 lakhs. The second quinquennial valuation of the assets and liabilities of the Fund, made by an actuary in Edinburgh in 1902, confirmed its sound condition and the favourable nature of its terms.

Failure of the rains for three seasons in succession brought about the famine of 1876–8, and, in general, failure of the rains in any part is the main cause of famine. Those parts which receive the least rainfall are therefore the most liable to suffer: namely, Chitaldroog District, and the northern parts of Tumkūr, Bangalore, and Kolār Districts.

Famine.

Rāgi is the staple food of all the labouring classes, and if this crop fails there is widespread distress. A remedial measure is the raising of crops of *jola* on the dry beds of tanks, but this is only a partial palliative. If the *rāgi* season has passed, horse-gram is more extensively sown for human food, but this will not mature without some rain. *Rāgi* used formerly to be stored in underground pits, where it would keep good for ten years, to be brought out for consumption in times of scarcity. But the inducements now presented by high prices elsewhere and cheap means of transport have interfered with the replenishment of such stores, and consequently there is less resource of that kind to fall back upon. Rice, which is the main irrigated crop, is not much eaten except by Brāhmans, but always commands a ready sale for export.

The information about famines due to drought previous to that mentioned above is very scanty, but dreadful famines followed the devastations of the Marāthā armies and the wars with Mysore at the end of the eighteenth century. During the invasion of Lord Cornwallis, when, as Buchanan-Hamilton says, the country was attacked on all sides and penetrated in every direction by hostile armies, or by defending armies little less destructive, one-half at least of the inhabitants perished of absolute want. In the last century periods of scarcity occurred in 1824, 1831, and 1833. The ten years following 1851 were a time of great trial, when year after year the sparse and ill-timed rainfall kept the agricultural classes in constant dread of actual want. Two or three seasons ensued which were prosperous, but in 1866 famine was again present in Chitaldroog and the north-eastern parts of the State.

Bad, however, as these seasons were, and critical as was the condition of the country, the misfortune which was to come put them completely in the shade. The failure of rain in the years 1875–7 brought about a famine such as was never known before. The beginning of the calamity was the partial failure of the rains in 1875, the fall being from one-third to two-thirds of the average. Much of the food-crop was lost; but owing to the usual large stocks in the State, only temporary or occasional distress was caused, for the price of grain did

not rise to double the ordinary rates. In 1876 the rainfall was again very short, and barely a third of the ordinary harvest was reaped. Matters were aggravated by the fact that crops had failed in the adjacent Districts of Madras and Bombay; and by the middle of December famine had begun. From then till March matters grew worse. The only railway, from Madras to Bangalore, brought in daily 500 tons of food (enough to support 900,000 people), yet the prices of food ranged during those months at four to five times the ordinary rates. In April and May, 1877, the usual spring showers fell, and hope revived. But as the month of June wore on and July came, it was apparent that the early rains were going to fail again, for the third year in succession. Panic and mortality spread among the people; famine increased and became sore in the land. In May 100,000 starving paupers were being fed in relief kitchens, but by August the numbers rose to 227,000, besides 60,000 employed on the railway to Mysore city. It became evident that the utmost exertions of the local officers were unequal to cope with the growing distress. The Viceroy, Lord Lytton, visited Mysore, and appointed Mr. (now Sir) Charles Elliott as Famine Commissioner, with a large staff of European assistants. Relief works were now concentrated, and gratuitous relief was confined to those whose condition was too low to expect any work from them at all. Bountiful rains in September and October caused the cloud to lift, and the pressure of famine began to abate. During the eight months of extreme famine no crops were reaped; the price of grain ranged from three to six times the ordinary rates, and for the common people there were no means of earning wages outside the relief works. Even in 1877-8 the yield of the harvest was less than half the crop of an ordinary year. From November, 1877, throughout 1878, prices stood at nearly three times the rate of ordinary years. The mortality in this famine has been estimated at $1\frac{1}{4}$ millions in a population of $5\frac{1}{3}$ millions. Taking the ordinary mortality at 24 per 1,000 per annum, this was raised to nearly fivefold, while a mean annual birth-rate of 36 per 1,000 was reduced to one-half.

The principal protective measures thus far successfully taken have been the extension of railways, so as to admit of the import and distribution of food-grains to all parts, and the extension of irrigation and other facilities for increasing cultivation. Plans for suitable relief works are also kept in readiness to be put into operation at the first appearance of necessity arising from scarcity.

Administration.

His Highness the Mahārājā is the head of the State, having been invested with full powers on attaining his majority in 1902. In his name, and subject to his sanction, the administration is carried on by the Dīwān or prime minister, who is assisted by two Councillors. The Chief Court is the highest tribunal

of justice, and is composed of a bench of three Judges, headed by the Chief Judge. There is a secretariat staff for the transaction of official business, and Commissioners and other departmental officers at the head of the various branches of the administration, with a Comptroller for finance and treasury affairs. The dynastic capital is at Mysore city, but the administrative head-quarters are at Bangalore. The Mahārājā resides for part of the year at each of these places, but the higher offices of the State are located at Bangalore. The Representative Assembly meets once a year at Mysore at the time of the Dasara festival, when the Dīwān delivers his annual statement of the condition of the finances and the measures of the State, after which suggestions by the members are considered.

The administrative divisions of the State are eight in number, called Districts, with an average area of 3,679 square miles, and an average population of 692,425. They are BANGALORE, KOLĀR, TUMKŪR, MYSORE, HASSAN, KADŪR, SHIMOGA, and CHITALDROOG. Each of these is named after its head-quarters, except Kadūr District, the head-quarters of which are at CHIKMUGALŪR. Mysore is the largest District and Hassan the smallest.

The chief officer in charge of a District is the Deputy-Commissioner, who is assisted by a staff of Assistant Commissioners. The subdivisions of a District are *tāluks*, altogether 69 in number, averaging eight or nine to each District[1], with an average area of 427 square miles. These are formed into convenient groups of two, three, or four, which are distributed, under the authority of the Deputy-Commissioner, among the various Assistants and himself in such a way as to facilitate the dispatch of business and train the junior officers for administrative duties.

The officer in charge of a *tāluk* is the *amaldār*, assisted by a *sheristadār*, who has charge of the treasury and acts as his deputy in case of need. Large *tāluks* have a portion divided off into a sub-*tāluk* under the charge of a deputy-*amaldār*, but with no separate treasury. A *tāluk* is composed of *hobalis* or *hoblis*, the average number being six to ten. In each of these is a *shekdār*, or revenue inspector.

The headman of a village is the *pātel*, a *gauda* or principal farmer, who is assisted in revenue collections by the *shānbhog*, a Brāhman accountant. These offices are hereditary, and form part of the village corporation of twelve, called *ayagār* in Kanarese and *bāra balūti* in Marāthī. The other members of this ancient institution are the Kammar or blacksmith, the Badagi or carpenter, the Agasa or washerman, the Panchāngi or Joyisa, an astrologer and calendar maker, the Nāyinda or barber, the Mādiga or cobbler and leather-dresser, the Kumbar or potter, the Talāri or watchman, and the Nīrganti or dis-

[1] Kadūr has only five, while Mysore has fourteen, and Kolār ten.

tributor of water for irrigation. The dozen is made up in some parts by including the Akkasāle or goldsmith; in other parts his place is taken by the poet, who is also the schoolmaster. The respective duties of these village officials are definitely fixed; and their services are remunerated either by the grant of rent-free lands, or by contributions, on a certain scale, of grain, straw, &c., at harvest time.

Legislation and justice.

On the rendition in 1881 a schedule of Acts already in force in Mysore was appended to the Instrument of Transfer. A Legislative department, under a legislative secretary, was formed in 1886. There is no special Legislative Council. The various regulations passed into law up to 1901 have been revised and published in two volumes, forming the Mysore Code. The first volume contains the Acts passed before the rendition and then taken over from the British Administration; the second volume contains the Regulations passed since. Among the later Regulations the following may be mentioned: To amend the Code of Criminal Procedure (I of 1888), Measures of Length (III of 1890), to amend the Mysore Land Revenue Code (I of 1891), Infant Marriages Prevention (X of 1894), Village Sanitation (I of 1898), General Clauses (III of 1899), Electricity (IV of 1900), to amend the Mysore Mines Act (VI of 1900), Land Improvement Loans (I of 1901), Mysore Civil Courts (III of 1901), Code of Civil Procedure (VI of 1901), Indian Evidence Act (VIII of 1901), Local Boards (II of 1902), Weights and Measures (III of 1902), Registration (I of 1903).

In 1903 there were 16 Munsifs' courts, 5 Sub-Judges' courts, 3 District courts, and the Chief Court. Munsifs exercise original jurisdiction in cases up to Rs. 2,500 in value; Subordinate Judges have jurisdiction in cases from above Rs. 2,500 to Rs. 10,000, and hear appeals from decisions of Munsifs if referred to them by the District Judge; District courts have unlimited jurisdiction, and hear appeals from decisions of Munsifs, and from those of Subordinate Judges within the limit of Rs. 3,000; the Chief Court, sitting as a bench of not less than two Judges, disposes of all other appeals brought before it.

STATISTICS OF CIVIL JUSTICE

	Average for ten years ending		1900-1.	1903-4.
	1890.	1900.		
Suits for money and movable property	12,668	19,764	17,931	17,210
Title and other suits	2,402	2,347	1,654	1,019
Rent suits	656	577	501	580
Total	15,726	22,688	20,086	18,809

In 1903 there were 122 Subordinate Magistrates, 3 Sessions Judges, 8 District Magistrates, and the Chief Court. The Subordinate Judges of Chikmugalūr, Chitaldroog, and Hassan were also invested with the powers of Assistant Sessions Judges. In 1887 the system of trial by jury was introduced in Sessions cases. For appellate jurisdiction in criminal cases, the benches of the Chief Court that sit for civil appellate work dispose also of criminal appeals. The Chief Court moreover acts as a court of reference and a court of revision.

STATISTICS OF CRIMINAL JUSTICE

	Average for ten years ending		1900-1.	1903-4.
	1890.	1900.		
Number of persons tried :—				
(*a*) For offences against person and property .	17,056	18,867	18,848	16,533
(*b*) For other offences against the Indian Penal Code .	3,039	3,959	3,565	3,376
(*c*) For offences against Special and Local laws .	2,984	4,071	4,626	2,869
Total	23,079	26,897	27,039	22,778

The Excise Commissioner is also Inspector-General of Registration. The number of sub-registry offices in 1904 was 80, of which 59 were special, or with paid establishments, the remainder being in charge of *tāluk* revenue officers. The number of documents registered from 1881 to 1890 averaged 21,747; from 1891 to 1900, 46,251; and in 1904 the number was 57,637.

Finance. In addition to the local audits, the State accounts have been examined at various times by auditors deputed by the Government of India. The revenue under all heads has risen. The increase under land is due to extension of cultivation. Since 1885 mining leases and the royalty on gold-production have added a new item to the revenue. The increase under excise is due mainly to an improved system of control, but also to a larger consumption arising from higher wages and the influx to the Gold Fields, and from the employment on railways, public works, and coffee plantations of classes with drinking habits. The decrease under land customs and assessed taxes is due to these duties having been transferred to municipalities wherever they exist. The only customs retained by the State are on areca-nuts, the bulk of which are the produce of Kadūr and Shimoga Districts. An increase under forests took place owing to a revival of the market for sandal-wood, and to a greater supply of sleepers for railways. Subsequently the war between China and Japan temporarily crippled one of the principal sandal-

wood markets, and not only did the demand for railway sleepers cease with the completion of the lines, but coal began to be substituted for wood as fuel for the engines. Since 1902 a substantial return has been received from the Cauvery Power installation for supplying electricity to the gold-mines.

PRINCIPAL SOURCES OF ORDINARY REVENUE

(In thousands of rupees)

	Average for ten years ending		1900-1.	1904-5.
	1890.	1900.		
Land revenue	77,33	94,16	98,31	96,69
Mining leases	60*	8,36	14,45	16,91
Stamps	4,99	7,27	7,94	7,16
Excise	14,81	31,34	36,17	37,75
Provincial rates	3,81	3,83	3,10	3,64
Assessed taxes	2,98	2,78	2,16	3,01
Forests	8,76	13,35	12,58	18,90
Registration	25	45	1,25	1,18
Other sources	7,56	15,93	15,78	29,22
Total	1,21,09	1,77,47	1,91,74	2,14,46

* From 1885-6.

EXPENDITURE UNDER PRINCIPAL HEADS

(In thousands of rupees)

	Average for ten years ending		1900-1.	1904-5.
	1890.	1900.		
Charges in respect of collection (principally land revenue and forests)	16,29	21,09	22,47	23,41
Salaries and expenses of Civil Departments :—				
(*a*) General administration	3,02	6,15	8,29	8,18
(*b*) Law and justice	6,05	9,18	10,22	10,41
(*c*) Police	5,18	8,24	9,65	9,80
(*d*) Education	1,68	4,87	6,65	7,73
(*e*) Medical	1,53	2,87	4,29	5,86
(*f*) Other heads	6,23	8,19	10,98	10,66
Pensions and miscellaneous civil charges	40,74	53,33	68,36	66,43
Famine relief	1	20	7	...
Irrigation	5,42	11,16	8,04	14,72
Public works	9,19	34,59	49,08	40,72
Other charges and adjustments	14,21	13,85	14,14	19,06
Total expenditure	1,09,55	1,73,72	2,12,24	2,16,98

The land tenures in the State are *sarkār* or State, and *inām*. The former are held under the *ryotwāri* or individual tenure, on payment

of *kandāyam* or a fixed money assessment, settled for thirty years. *Kandāyam* lands are held direct from the State on annual leases, but the assessment is not as a rule altered or raised during the period for which it is fixed. The ordinary rates of assessment apply to the whole extent of the ryot's holding, and not to the area actually cultivated, as he has rights to a certain extent over included waste. Remission of assessment is not given in individual cases; but when there is general loss of crop in a locality and consequent distress, remission may be granted as a measure of relief.

Land revenue.

In the case of private estates, such as *inām* and *kāyamgutta* villages, and large farms of Government lands cultivated by *payakaris* or under-tenants, the land is held on the following tenures: *vāram*, or equal division of produce between landlord and tenant, the former paying the assessment on the land to the State; *mukkuppe*, under which two-thirds of the produce goes to the cultivator, and one-third to the landlord, who pays the assessment; *arakandāya* or *chaturbhāga*, under which the landlord gets one-fourth and the cultivator three-fourths of the produce, each paying half the assessment; *wolakandāya*, in which the tenant pays a fixed money-rate to the landlord, which may either be equal to or more than the assessment.

An hereditary right of occupation is attached to all *kandāyam* lands. As long as the ryot pays the State dues he has no fear of displacement, and virtually possesses an absolute tenant-right as distinct from that of proprietorship. When the State finds it necessary to resume the land for public purposes, he always receives compensation, fixed either by mutual agreement or under the Land Acquisition Act. No legislation has been passed to check the acquisition of land by non-agricultural classes.

In the Malnād or hill country towards the Western Ghāts the holdings of the ryots are called *vargs*. A *varg* consists of all the fields held by one *vargdār* or farmer[1]; and these are seldom located together, but are generally found scattered in different villages, and sometimes in different *tāluks*. Attached to each *varg* are tracts of land called *hankalu* and *hādya*, for which no separate assessment is paid. *Hankalu* lands are set apart for grazing purposes, but have sometimes been used for 'dry' cultivation. Those attached to 'wet' fields are called *tattina hankalu*. *Hādya* are lands covered with low brushwood and small trees, which supply firewood or leaves for manuring the fields of the *varg*. Tracts of forest preserved for the sake of the wild pepper vines, *bagni*-palms, and certain gum-trees that grow in them, are called *kāns*, for which a cess is paid.

[1] These terms often appear as *warg* and *wargdār* in official papers.

Lands for coffee cultivation have been granted from State jungles, chiefly in the Western Ghāts region. The plot applied for was sold by public auction. If the jungle was to be cleared, notice was given, to allow of officials removing or disposing of 'reserved' trees. Besides coffee nothing may be grown on the land, except shade trees for the coffee. Within five years a minimum of 500 coffee-trees to the acre must be planted. On the coffee-trees coming into bearing an excise duty, called *hālat*, of 4 annas per maund, was formerly levied on the produce, in lieu of land rent. But from 1885 an acreage assessment was substituted—either R. 1 per acre, with a guarantee for thirty years on the terms of the survey settlement, or a permanent assessment of Rs. $1\frac{1}{2}$ per acre, on the terms of the Madras Coffee Land rules. Nearly all the large planters have adopted the latter conditions. But the great fall in the prices of coffee in recent years, owing to the competition of Brazil, has reduced this previously flourishing industry to a very depressed condition.

Lands have been offered since 1904 for rubber cultivation, in plots of 50 acres, selected with the consent of the Forest department, to be held free of assessment for the first five years, and subject to the assessment fixed by the survey settlement in the sixth year and after. The work of planting must be commenced within one year from the date of the grant; and in stocking the area with rubber plants, trees may not be felled without permission.

Lands for cardamom cultivation are granted from the jungles on the eastern slopes of the Western Ghāts, where the plant grows wild. Tracts of not less than 5 or more than 200 acres, when applied for, are put up to auction, and may be secured on a twenty years' lease on terms similar to those for coffee lands. Not less than 500 cardamom plants per acre must be planted within five years, and nothing else may be cultivated on the ground. Trees, except of the 'reserved' kinds, may be felled to promote the growth of the cardamoms.

The tenure called *kāyamgutta* literally means a 'permanent village settlement.' It owes its origin probably to depopulated villages being rented out by the State on a fixed but very moderate lease, on the understanding that the renter would restore them to a prosperous condition. But in the early part of last century even flourishing villages were granted to court favourites on this tenure, and some of the most valuable lands are thus held. *Shrāya* lands are waste or jungle tracts granted at a progressive rent, in order to bring them under cultivation. They are free of assessment for the first year, and the demand increases afterwards yearly from one-quarter to full rates in the fourth or fifth year. For the planting of timber, fruit, and fuel trees, unassessed waste land, or assessed 'dry' land, if unoccupied for ten years con-

secutively, is granted free of assessment for eight years, then rising by a quarter rate to full assessment in the twelfth year.

The conditions on which *inām* tenures are held vary considerably. Some are free of all demands, while in others the usual assessment is reduced. The grants differ also in origin, according as they were made to Brāhmans, for religious and charitable purposes, to village servants, for the maintenance or construction of tanks and wells, or otherwise.

Licences for exploring for minerals, on areas approved by Government, are granted on deposit of a fee of Rs. 10, to run for one year. No private or occupied lands may be explored without the consent of the owner, occupier, or possessor. Prospecting licences for minerals may be obtained for one year, on a minimum deposit of Rs. 100, and a rent of Rs. 50 per square mile or portion of a square mile. The licensee may select, within the year, a block for mining, not exceeding one square mile, in the licensed area.

Mining leases limited to one square mile, of rectangular shape, are granted for thirty years, on deposit of Rs. 1,000 as security, and furnishing satisfactory evidence that a sum of £10,000 will be raised within two years for carrying on mining operations on the block of land applied for. The cost of survey and demarcation is paid by the applicant, and mining operations must start within one year. An annual rent of R. 1 per acre is payable to the State on the mining block, together with all local cesses and taxes; and in each year in which a net profit is made, a royalty of 5 per cent. is levied on the gross value of gold and silver produced. If the net profits exceed £25,000, an additional royalty is payable of 5 per cent. on the net profits above that sum. But in the case of a registered company, the royalty may be paid on divisible instead of net profits.

The land revenue assessment is fixed by the Revenue Survey department on the method already described (p. 214, above). The system resembles that followed in Bombay, which was preferred to that of Madras. The former was chosen because all the steps in survey, classification, and settlement are under the direction of one responsible head, and made to fit into one another.

The present revenue survey was introduced in 1863, and the settlement was completed in 1901. The settlements made under it are current for thirty years. The previous survey, made at the beginning of the nineteenth century, was necessarily very imperfect; and after the lapse of fifty years the records had become extremely defective, advantage having been taken of the insurrection in 1830 to destroy the survey papers in many cases.

In 1700 the Mysore king Chikka Deva Rājā acknowledged one-sixth to be the lawful share of the crop to be paid to him, but added

a number of vexatious petty taxes to enhance the amount indirectly. In Bednūr (Shimoga District) Sivappa Naik's *shist*, fixed in 1660, was one-third of the gross produce. This continued for thirty-nine years, after which various additions were made, chiefly to raise funds for buying off the enemy. After the overthrow of Tipū Sultān, during the eleven years of Pūrnaiya's administration (1800–10), the highest land revenue was equivalent to 94 lakhs in 1809, and the average was 83 lakhs. During the twenty-one years of the Rājā's administration which followed (1811–31), the highest was 90 lakhs, and the average 79 lakhs. In the first year of British administration (1831–2), the land revenue was set down as 48 lakhs, but included in this were 83 different cesses, besides 198 taxes unconnected with it. The general average assessment was usually one-third of the gross produce. In 1881–2 the total revenue was 107 lakhs, of which the land yielded 71 lakhs. In 1903–4 the total revenue had risen to 214 lakhs, and the land revenue to 98 lakhs.

Miscellaneous revenue.

The two principal sources of excise revenue are toddy and arrack. The former, drawn from the date-palm, and also from coco-nut, palmyra, and *bagni* palms, is the immemorial beverage of the agricultural classes, a mild and comparatively innocuous drink, its average alcoholic strength being 2½ per cent. Arrack, which is far stronger and more harmful, is chiefly consumed by industrial labourers, and has an average alcoholic strength of 39½ per cent. The consumption of toddy is fairly stationary, while that of arrack has a decided tendency to increase year by year. Formerly the right to sell toddy was farmed out by Districts, and was virtually a monopoly in the hands of a few contractors, between whom and the Darbār was a large class of middlemen. Want of proper control not only led to the supply of inferior liquor, but threatened the destruction of the date groves themselves. The new system broke up each *tāluk* into convenient farms, which supplied a certain number of shops from particular groves. The number of toddy shops remained the same, so that the increase of revenue was entirely due to the abolition of needless intermediaries. As regards arrack, the policy has been to enhance the duty gradually up to the highest point consistent with the prevention of illicit distillation or contraband importation. In addition to this, the main causes which have tended to increase the revenue have been—the abolition in 1884 of all outlying distilleries and the concentration of manufacture in one distillery near Bangalore under centralized control; and further, the separation in 1892 of the business of manufacture from that of distribution, and the adoption of a system for the sale of the privilege of retail vend. These measures led to the manufacture being taken up by European firms with large capital and

superior technical resources, thus reducing the cost. Supplies were conveyed under separate contract to bonded dépôts in the Districts. In 1897 the still-head duty was raised to Rs. 4-12, and the retail rate to Rs. 6-6, per gallon, for liquor 20° under proof. The sale of the right of vend, on the 'separate shop system' in the cities and Gold Fields, and on the 'vend rent system' in *tāluks* or circles of villages, has secured to the State what previously formed the profits of middlemen. In 1898 a tree tax was introduced, for better regulating the consumption of toddy and conserving the date groves, the rate being Rs. 1-1 per tree per annum for date-trees, and corresponding rates for other palms. In 1901 a tree rent of 4 annas per tree per annum was levied on trees tapped for toddy. In 1903-4 there were 12 toddy dépôts and 3,837 retail shops, 962 of these being for the sale of *bagni* toddy. The number of trees tapped was 422,855, and the quantity of toddy consumed was 9,809,640 gallons. Retail shops for the sale of arrack numbered 931. The issue of spirits from the distillery amounted to 43,482 gallons. The greatest consumption is, of course, in the cities and the Gold Fields. The other sources of excise revenue are country beer, foreign liquors, hemp drugs (*gānja* and *mājum*), and opium. In 1899 the proportion of alcohol in country beer was fixed so as not to exceed 8 per cent. by volume. A scale of licence fees for the sale of foreign liquors was also prescribed. Country-made foreign spirits of weaker strength were introduced in 1904 to meet the requirements of the people, who were found in their absence to have recourse to inferior foreign stuff. *Gānja* is grown by contractors under departmental supervision in specified localities. There were 237 retail shops in 1903-4 for the sale of *gānja* and *mājum*, and 15,594 seers were sold. Opium, previously imported from Mālwā, has since 1903 been obtained from the Madras storehouse. There were 126 shops in 1903-4 licensed to sell opium, and 1,438 seers were consumed.

Local and municipal.

Up to 1901 there were ten Local fund circles, one for each of the eight Districts, and for the French Rocks and the Kolār Gold Fields. Two years later a new system was introduced, and a District board has been constituted for each District (in addition to the Kolār Gold Fields Sanitary Board), besides a *tāluk* board for each *tāluk* or sub-*tāluk*. In 1904 these boards consisted of 1,188 members, of whom 372 were appointed *ex officio*, and 816 were non-official. *Tāluk* boards (since 1905) consist of 15 members: namely, 5 official, 5 elected, and 5 appointed by the State. District boards consist of 25 members: namely, one non-official elected for each *tāluk* of the District by the members of the *tāluk* board from their own body, and the rest *ex officio* or appointed by the State. The members hold

office ordinarily for three years. Their chief functions embrace the construction and maintenance of roads and bridges, with assistance of the Public Works department if required, improving and conserving the water-supply, the provision and upkeep of travellers' bungalows and *musāfirkhānas* (native resthouses), dispensaries, sanitation of villages, &c. Funds are obtained by a cess of one anna in the rupee on land revenue, and on revenue from excise, *sayer*, and forests.

INCOME AND EXPENDITURE OF DISTRICT BOARDS

Particulars.	Average for ten years 1891–1900.	1900–1.	1903–4.
Income from—	Rs.	Rs.	Rs.
Land revenue*	5,02,409	5,22,591	5,22,639
Provincial rates	...	10,803	†1,66,356
Interest	...	...	275
Miscellaneous	36,592	37,249	2,905
Public works	3,426	1,924	10,644
Pounds	41,200	31,782	34,220
Ferries	8,605	5,845	19,388
Total income	5,92,232	6,10,194	7,56,427
Expenditure on—			
Refunds	692	224	17,692
General administration	22,531	31,407	52,408
Education	4,210	7,023	...
Medical	58,904	74,049	47,017
Miscellaneous	20,400	13,818	30,794
Public works	5,17,045	4,58,914	5,22,294
Total expenditure	6,23,782	5,85,435	6,70,205

* This item represents 76 per cent. of local cesses.
† Includes 1·12 lakhs special contributions from Local funds for plague and other establishments, and balances transferred from municipalities converted into Unions.

In 1901 the number of municipalities was 124 (exclusive of the Civil and Military Station of Bangalore), of which 117 had a population under 10,000, and 7 a population of from 10,000 to 100,000. In 1904, 36 of the minor municipalities, which were not *tāluk* head-quarters and had a population of less than 3,000, were converted into Unions, a *panchāyat* being appointed for each Union. A *panchāyat* consists of 5 to 12 members, appointed by the State. The 88 municipalities in 1904 had 1,049 members, of whom 285 were officials. All of the members are natives, except about 20 Europeans.

The Kolār Gold Fields Sanitary Board was constituted in September, 1899, with 3 *ex-officio* members, and 4 non-official members nominated by the Mining Board. Its jurisdiction extends over the Kolār Gold Fields Sanitary Circle, embracing the Gold Fields and many of the surrounding villages. It deals with disposal of refuse,

water-supply, prevention of overcrowding, drains and latrines, keeping and slaughter of live-stock, &c., burial and burning-grounds, prevention and treatment of infectious and contagious diseases, and underground sanitation of the mines.

The municipal board of the Civil and Military Station of Bangalore has consisted, since 1904, of a president, a medical officer, and 24 other members, 6 appointed by the Resident, and 18 elected, the former holding office for three years, and the latter for two. The Trades Association elect one member, Europeans and Eurasians 6, Muhammadans 3, and Hindus and others 8.

INCOME AND EXPENDITURE OF MUNICIPALITIES

	Average for ten years 1891–1900.	1900–1.	1903–4.
	Rs.	Rs.	Rs.
Octroi	1,56,298	2,48,426	2,19,038
Tax on houses and lands	1,29,997	1,63,962	1,83,879
Other taxes	2,881	1,217	1,32,917
Rents	18,832	24,507	30,277
Loans	36,463	33,026	1,03,464
Other sources	3,05,900	3,08,024	1,81,033
Total income	6,50,371	7,79,162	8,50,608
Expenditure on administration and collection of taxes	53,756	70,292	65,397
Public safety*	3,254	...	759
Water-supply and drainage	23,014	27,298	54,747
Conservancy	1,34,510	1,79,641	1,80,901
Hospitals and dispensaries	41,315	53,452	26,027
Public works	2,17,463	1,68,905	2,56,172
Education	38,044	38,451	39,146
Other heads	1,30,941	2,25,301	3,34,666
Total expenditure	6,42,297	7,63,340	9,57,815

* Police not charged to municipalities.

Public Works. The Public Works department is controlled by a Chief Engineer, a Deputy-Chief Engineer, and two Superintending Engineers, who are in charge respectively of the Eastern and Western Circles. These are Royal Engineers or European officers. Separate branches have been formed for roads and buildings, and for irrigation. The executive staff are, with few exceptions, natives trained in Indian Engineering Colleges. Local works on a large scale, which require professional skill, are carried out by the Public Works department on requisition from other departments, by which the needed funds are placed at their disposal.

Of original works carried out by the department only a few can be mentioned. The railways include the line from Bangalore to Mysore

and Nanjangūd south-westwards, to Gubbi westwards, to Hindupur northwards, and the Kolār Gold Fields and Birūr-Shimoga branches. The irrigation works include the Srīrāmadevar anicut and channels, and others in Mysore and Hassan Districts, the great Māri Kanave, Bora Kanave, Srinivāsa Sāgara, and many more. The excellent system of roads through the formerly impassable mountainous parts of Kadūr District, and the fine *ghāt* roads through passes to the west coast, deserve special mention. With these should be named the great bridges over the Tungabhadra at Harihar, over the Hemāvati at Sakleshpur, and the bridges at Belūr, Bāle Honnur, Tippur, Tadasa, and other places over broad rivers. Of hospitals, the most important are the Bowring and Lady Curzon in the Civil and Military Station of Bangalore, and the Victoria in the city. Other buildings include the public offices at Bangalore, the Palace, the Residency, the Central College, and Mayo Hall, the new Palace at Mysore city, with the public offices there, the Mahārājā's College, &c., and at Seringapatam the restoration of the Daryā Daulat.

Municipal and other water-supply schemes are represented by the Hesarghatta tank, the source of the Bangalore water-supply; the filling up of Pūrnaiya's Nullah at Mysore and the carrying out of the Kukarhalli and other water-works there; the provision at Betmangala for the water-supply of the Kolār Gold Fields, and minor works of that nature in various towns. The transmission of electric power from the Cauvery Falls to the Kolār Gold Fields having been successfully accomplished, electric lighting from the same source has been introduced into Bangalore and is being carried out at Mysore. Large extensions have been laid out and occupied in Bangalore and Mysore city, with a new town at the Gold Fields, all on the most modern principles.

Army.

The total strength of the British and Native army stationed within Mysore on June 1, 1903, was as follows: British, 2,093; Native, 2,996; total, 5,089. The Mysore State forms for military purposes part of the Ninth (Secunderābād) Division, which is for the present directly under the Commander-in-Chief. It has a cavalry and an infantry brigade, as well as artillery. The only military station is Bangalore, which is also the head-quarters of a volunteer rifle corps. The total volunteer strength within Mysore, including detachments of railway volunteers, was 1,512 in 1903. The Coorg and Mysore Rifles also have detachments at Chikmugalūr and Sakleshpur, in the planting districts to the west.

The Mysore State force had a sanctioned strength of 2,722 in 1904, of whom nearly a half were Muhammadans and a fifth Marāthās, the rest being Hindus and Christians in about equal numbers. The force is composed of two regiments of Silladār cavalry, and three

battalions of Barr infantry. In 1903 the former were 1,072 strong, and the latter 1,814. The Imperial Service Lancers, raised in April, 1892, form one cavalry regiment, stationed in Bangalore, and with them is kept up a transport corps of 300 ponies. The Local Service Cavalry regiment is stationed at Mysore. The Barr battalions have their head-quarters at Mysore city, Shimoga, and Bangalore, with detachments in out-stations. The State military expenditure was 7·9 lakhs in 1880–1, 6·1 lakhs in 1890–1, and 9·4 lakhs in 1903–4.

Police and jails.

The police are under an Inspector-General. The sanctioned strength of the regular force in 1904 was 882 officers and 5,045 men, or one policeman to every 5·83 square miles and 1,073 inhabitants. The village police were for the first time provided with uniform and arms in 1901–2. They help the regular police in the prevention and detection of crime, and in reporting the arrival and departure of criminal gangs and suspicious-looking strangers. The system of night watch is regularly maintained in all the villages of the Maidān tracts. The watching by *totis* and *talāris* in *ookkads* and outposts on important roads and jungle tracts has worked well. There is a Police Training School, where recruits and officers and men are taught drill, codes, and surveying and drawing. But the police service is not as a rule popular with the educated classes of natives. Finger-prints and anthropometry have been used to trace criminals in recent years.

The special reserve is a body selected for good physique, and is better paid, equipped, and drilled than the other police. The members go through a course of musketry, and are held ready for emergencies in any part of the country, and are employed in putting down organized dacoities and serious disturbances of the public peace. There are three detachments, stationed respectively at Bangalore, Mysore city, and Shimoga.

The Kolār Gold Fields Police is a special body, with 50 officers and 279 men, under a separate European Superintendent, and is largely composed of Sikhs and Punjābis recruited from the north of India. It was formed in April, 1900, and has jurisdiction over the Bowringpet, Mālūr, and Mulbāgal *tāluks*.

The troops aid the police in various ways; detachments of the Local Service Cavalry patrol certain roads, while the infantry act as treasury guards and escorts. The Railway police, reckoned as in British service, are under the Superintendent of Police of the Civil and Military Station of Bangalore, subject to the orders of the Resident.

The following are statistics of cognizable crime, the figures being the average for the five years ending 1901: number of cases reported, 3,221; number decided in criminal courts, 1,828; number ending in acquittal or discharge, 584; number ending in conviction, 1,244.

POLICE STATISTICS

	1881.	1891.	1901.	1904.
Supervising Staff.				
District and Assistant Superintendents	1	12	12	13
Inspectors	5	14	18	102
Subordinate Staff.				
Sub-inspectors	352	465	843	13*
Head constables	22	...	...	753*
Constables	3,676	4,684	5,034	5,045
Municipal	978	449	...	526
Total expenditure . Rs.	4,55,000	6,61,000	9,05,000	9,78,000

* The designations are chief constables (13), head constables, *jamadārs*, *daffadārs*, and sergeants (753).

Convicts are employed on cleaning and grinding *rāgi*; on prison duties, as prison warders, servants, and gardeners; on the preparation of articles for use or consumption in the jails; on jail buildings, manufactures, and public works. The chief industries are printing, carpet, tent, and blanket-making, cloth-weaving, gunny and coir work, carpenter's and blacksmith's work in the Central jail at Bangalore; and weaving and spinning, basket and mat-making, and pottery in the Mysore District jail. The most numerous admissions into hospital on account of sickness are for malarial fevers. The high mortality in 1881 shown below was due to dysentery or diarrhoea, and anaemia; in 1901 there were four deaths from cholera.

JAIL STATISTICS

	1881.	1891.	1901.	1904.
Number of Central jails	1	1	1	1
" District jails	8	2	2	1
" Subsidiary jails (lock-ups)	81	78	78	77
Average daily jail population:				
(*a*) Males—In Central jails	786	424	669	872
In other jails	1,104	459	493	131
(*b*) Females—In Central jails	41	44	32	43
In other jails	45	17	20	8
Total	1,976	944	1,214	1,054
Rate of jail mortality per 1,000	20.6	13	19.74	17.08
Expenditure on jail maintenance . Rs.	1,59,000	89,000	1,12,000	88,744
Cost per prisoner . Rs.	77-6-2	94-11-10	92-5-4	84-11-6
Profits on jail manufactures Rs.	12,194	15,900	18,738	36,230
Earnings per prisoner . Rs.	6-6-5	19-7-9	18-8-8	42-8-0

Highly as learning was always esteemed, education seems never under former native rulers to have been regarded as a duty of the State. It was left to the voluntary principle, and was mostly in the hands of the priests. At the same time we find that, in the primitive corporation of the 'village twelve,' a poet, who was also a schoolmaster, was sometimes provided instead of a goldsmith. Endowments were often given for promoting learning as a religious duty.

Education.

Education on modern lines was first introduced by European missionaries. In 1826 a Mysore Mission College was proposed for Bangalore by the London Mission, conducted by a staff of European professors, aided by learned *pandits*, and designed to attract students from all parts of India. But their home authorities were not prepared to carry it out. Between 1840 and 1854 the Wesleyans established schools at some of the District head-quarters with aid from Government, the principal being their institution at Bangalore, founded in 1851. At Mysore the Mahārājā maintained an English free school. The State expenditure on education in 1855 was Rs. 16,500 a year.

The Educational department was formed in 1857, and in 1858 a high school affiliated to the Madras University was established at Bangalore, converted in 1875 into the Central College. The Wesleyan schools in the Districts were taken over by Government, and vernacular schools gradually established in the *tāluks*. In 1861 a normal school, and in 1862 an engineering school, were attached to the high school at Bangalore. In 1868 the *hobli* school system, for extending primary education among the masses, was introduced, and greatly added to the operations of the department. The schools were to be supported by a local cess; but in 1872 the proportion of 24 per cent. of Local funds was allotted as the village school fund, raised in 1903 to 33 per cent.

The famine of 1876–8 had a disastrous effect on all public undertakings. Education, which had greatly flourished, both public and private, was starved for want of funds. The normal schools were closed, the European Inspectors were dispensed with, the Director of Public Instruction was placed in charge of the Census and the Police in addition to Education, and later on of Archaeology instead of Police, all the cost of vernacular schools was thrown on Local funds, and rigid economy stood in the way of any expansion. In 1884 a revision was made of the higher institutions, but it was not till 1890 that a freer expenditure enabled progressive measures to be adopted. In 1887 the Mysore local examinations were instituted for teachers and pupils of vernacular schools, giving a definite aim to the courses of study. At the end of 1888 education in the Civil and Military Station of Bangalore was transferred to the Madras Educational department. In 1889 the cost of the *tāluk* vernacular schools was again made a charge on State

funds, thus relieving the village school fund. In 1891 the number of native Deputy-Inspectors was doubled. The department is now controlled by an Inspector-General of Education, whose head-quarters were removed to Mysore in 1894 but again established at Bangalore in 1899. The State was divided in 1903 into two portions for control and inspection, between the Inspector-General and his Assistant. The former retains the eastern Districts, with head-quarters at Bangalore, and the latter has charge of the western Districts, with head-quarters at Mysore city. The only Europeans recruited from England are the heads of the colleges at Bangalore and Mysore. The inspecting staff was further strengthened in 1905.

Of the colleges affiliated to the Madras University, those of the first grade are the Central College at Bangalore and the Mahārājā's College at Mysore city. The former takes mathematics and physical science as the optional subjects for the B.A. degree, and the latter mathematics and history. The second-grade colleges are the St. Joseph's College at Bangalore, the Mahārānī's College at Mysore city, and the Sacred Heart College attached to the Convent of the Good Shepherd at Bangalore. This last and St. Joseph's are aided from the revenues of the Assigned Tract, and the others are supported by the State. The first-grade colleges are provided with hostels. There are also Sanskrit colleges of a high standard at Mysore, Bangalore, and Melukote, the two latter being aided. Bangalore has, moreover, been selected as the site of the Indian Institute of Research for post-graduate study, to be founded on Mr. Tata's endowment.

UNIVERSITY RESULTS

Passes in	1881.	1891.	1901.	1904.
Matriculation . . .	75	194	156	125
First or Intermediate in Arts or Science . . .	28	57	59	68
Ordinary Bachelor's degree .	4	35*	96*	131*
Higher and special degrees .	1	...	...	2

* These figures show the passes in any one branch of the three which qualify for the full degree.

Secondary schools include high schools and middle schools. The former have the matriculation examination as their goal, while the latter prepare for the lower secondary examinations, the course being partly English and partly vernacular. In 1904 there were 202 State, 3 municipal, 55 aided, and 3 unaided schools, the last being middle schools. The amount of aid to private schools is based on their expenditure, and their efficiency as tested by the reports of Inspectors and results of public examinations. The proportion of the male population of school-going age under secondary instruction in 1904 was 2 per cent.

The primary stages are divided into upper and lower, the latter ending with the ability to read from printed books. In 1904 there were 1593 State, 285 aided, and 14 unaided primary schools. As to the qualifications of the teachers, out of 3,179 in State employ, 149 held a normal school or teacher's certificate, others had passed various examinations, including 154 who had passed the University matriculation or higher tests, leaving 1,002 who had not passed any. The minimum pay of the village schoolmasters was raised from Rs. 5 to Rs. 7 a month in 1901, but better prospects are needed for their future. With a view to providing funds for this purpose, the levy of fees has been introduced in all village schools, except in the lower primary classes, and the former rates of fees in other schools have been raised all round. For the benefit of children of artisans and agriculturists above 15, night schools have been opened, of which there are 67, with 1,500 pupils, most of them in the east, but some in all Districts. There are local committees for the control of all *hobli* and village schools.

The first girls' schools were established by European missionary ladies at Bangalore in 1840. Mission girls' schools were opened later in some of the large towns. In 1868 the Government began with one in Bangalore, and as years went on the number increased all over the country. The *hobli* schools established in 1868 received both boys and girls together. Owing to the early marriage system, which did not admit of girls staying beyond the age of ten, and the entire want of female teachers, the girls' schools were really infant schools. But the mission schools had an advantage in both respects, being able to keep their girls longer, and to provide native Christian women as teachers.

One of the steps that gave an impetus to public female education was the establishment at Mysore city of the Mahārānī's Girls' School in 1881. This was confined to high-caste girls, and, with an unstinted expenditure, gave a free education. Its influential patronage overcame all objections, and it presented an acceptable compromise between Western methods and Eastern views as to the appropriate subjects of female education. It has for some years had Lady Superintendents from Girton or Newnham, and in 1902 was formed into a college, affiliated to the Madras University. Two Brāhman students took the B.A. degree in 1906. Admission is also now allowed of Christians and girls of low castes, provided they are of respectable family and approved by the management. By liberal scholarships girls have been induced to stay longer at school, and female teachers have been trained from among young widows, of whom there are at present ten adult and fourteen child-widows. The management is in the hands of a committee, and local committees have been appointed for girls' schools

in other parts of the country. These are, however, reported to take little interest in the matter as a rule.

In 1881, 1891, and 1901 respectively there were 46, 113, and 230 girls' colleges and schools, the percentage of girls under instruction to the female population of school-going age being 0·81, 3·14, and 4·22. In 1904 there were 243 schools, and the proportion was 4 per cent. The State funds contributed 1¼ lakhs (of which Rs. 38,000 was for the Mahārānī's College), and Local and municipal funds Rs. 6,800, to female education in 1903-4. The high school classes learn English as a first language. In the highest class of the middle school English is begun as a second language. Zanāna teaching is carried on by ladies of the Church of England Zanāna Mission in Bangalore, Mysore city, and Channapatna, chiefly among Musalmān families.

There are State normal schools at Mysore city, Kolār, and Shimoga, for training teachers; also a training department in the Mahārānī's College. State industrial schools are at work in Mysore and Hassan, mission industrial schools at Tumkūr and Kolār, with one for girls at Hassan, and a private industrial school at Melukote. The industrial school at Mysore has recently been reorganized[1] and placed under an experienced Superintendent, who also inspects the other industrial schools in the State. An engineering school has been established at Mysore, for training subordinates for the Public Works department. Weaving schools have been opened at Hole-Narsipur, Dod-Ballāpur, Chiknāyakanhalli, and Molakālmura, with carpentry and drawing classes attached. There are altogether eighteen industrial schools, of which six are weaving schools. A school has been established at Channapatna for the revival of the decaying local industries of lacquer-work, and the preparation of steel wire for the strings of musical instruments. Commercial classes are conducted at Bangalore by certain officials, and receive aid from Government. Students are attached to the laboratories of the Agricultural Chemist, the State Geologist, and the State Bacteriologist, and also to the silk farm established by Mr. Tata, and to the workshops of the Southern Mahratta Railway. Those at the silk farm are village schoolmasters, of whom five are trained annually, and then appointed as inspectors of sericulture. State scholarships are given to students from Mysore learning electricity at New York, forestry at Oxford, and in the Teachers', Engineering, Medical, and Veterinary colleges of Madras or Bombay, in the Victoria Jubilee Institute and schools of Art at those places, and in the Forest School at Dehra Dūn. One-fifth of the income from the Dāmodar Dās Charity Fund, yielding about Rs. 20,000 a year, has been assigned for scholarships to Gujarātī students selected by a committee—nine to those studying for the

[1] The Prince of Wales, on his recent visit to Mysore, laid the foundation stone of new buildings for it, to be called the Chāmarājendra Industrial Institute.

Bombay University examinations, one for a student of engineering or agriculture, and one for medicine. The remaining four-fifths are intended for post-graduate scholarships. One has been granted to a student for the history and economics tripos at Cambridge, and one to a student for the M.B. and C.M. course at Edinburgh, with a special view to practical microscope work. An institution of a special nature deserving of notice is the school for deaf-mutes and the blind at Mysore city, managed by a committee.

Most of the institutions for Europeans and Eurasians are in the Civil and Military Station of Bangalore, but the returns do not include regimental schools under the Army department. The number of pupils in the public schools was 1,314 in 1904. In the rest of the State there were 361, the majority being at the Urigam school on the Kolār Gold Fields. St. Joseph's College did well in the First Arts and matriculation. One European girl has passed the B.A. degree examination in English and French, and two the F.A. from the Sacred Heart and the Central College. The popular callings for young men are in the railway and telegraph departments, and the engineering and medical professions. Girls become nurses and governesses.

The number of Muhammadan pupils in all schools was 4,330 in 1881, 10,185 in 1891, 14,612 in 1901, and 13,383 (10,454 boys and 2,929 girls) in 1904. Six passed certain branches of the B.A. examination, one the First Arts, and one the matriculation. Only half-fees are levied from Muhammadan boys in all schools, and girls are free. There are also twenty-six scholarships allotted for Muhammadan students in the Central College, to encourage English education among them. Owing to the dearth of qualified teachers, the village Hindustāni schools are in a very poor condition. In 1904 there were 15 Muhammadans attending colleges, 3,581 in secondary schools, and 8,848 in primary schools. Some have received scholarships at the M.A.O. college at Alīgarh.

An interesting effort has been made to introduce education among the Lambānis. In all, 12 schools have been opened for them—7 in Shimoga District, and the others in Tumkūr, Chitaldroog, and Hassan Districts. They were attended in 1904 by 235 boys and 10 girls. For the low castes or Panchamās there are 70 schools, with 1,910 pupils, of whom 277 are girls.

The proportion of the population of school-going age under instruction was 11 in 1881, 9 in 1891, 14 in 1901, and 13 in 1904. At the Census of 1901 the proportion of the population able to read and write was 5·06 per cent., being 9·27 per cent. for males, and 0·77 for females. The cities and the Gold Fields have the highest percentage; and of the Districts, Kadūr stands highest and Mysore lowest. Shimoga, next to Kadūr, has the highest percentage of literate males,

and Tumkūr of literate females. The scale of fees in State colleges and schools was raised in 1904 to the following monthly rates: Village schools, lower primary, free; upper, 1 anna; middle, 2 annas. *Tāluk* schools, lower primary, 2 annas; upper, 3 annas; middle, 4 annas. English middle schools, 8 annas, 12 annas, R. 1, Rs. 1–4, and Rs. 1–8, according to class. English high schools, Rs. 2 and Rs. 2–8; F.A. class, Rs. 4; B.A. class, Rs. 5.

Expenditure on Educational Institutions maintained or aided by Public Funds in 1903–4

	Provincial funds.	District and municipal funds.	Fees.	Other sources.	Total.
	Rs.	Rs.	Rs.	Rs.	Rs.
Arts and professional colleges	1,34,105	596	7,433	2,244	1,44,378
Training and special schools	32,536	28,529	2,913	33,334	97,312
Secondary boys' schools	1,86,249	51,098	80,108	22,656	3,40,111
Primary boys' schools	29,281	1,71,167	4,680	10,721	2,15,849
Girls' schools	1,03,529	6,808	858	38,027	1,49,222
Total	4,85,700	2,58,198	95,992	1,06,982	9,46,872

Colleges, Schools, and Scholars

Institutions.	1880–1.			1900–1.			1903–4.		
	No.	Scholars.		No.	Scholars.		No.	Scholars.	
		Male.	Female.		Male.	Female.		Male.	Female.
Public.									
Arts colleges	3	129	..	8	504	12	8	546	5
Secondary schools—									
Upper (High)	16	533	..	14	3,160	10	14	2,651	22
Lower (Middle)	129	2,292	47	223	21,333	2,838	249	19,212	3,899
Primary schools	869	36,656	2,485	1,946	52,118	13,375	1,892	47,496	12,015
Training schools	9	974	..	5	158	5	4	147	11
Other special schools	1	..	..	48	1,380	98	55	1,670	120
Private.									
Advanced	..	..	..	12	224	24	9	188	16
Elementary	..	..	..	1,753	20,770	459	1,567	17,965	313
Total	1,027	40,584	2,532	4,009	99,647	16,821	3,798	89,875	16,401

Among the oldest newspapers in the vernacular were the *Kāsim-ul-Akhbār* in Hindustāni, started in 1863, and still published; and the *Karnātaka Prakāsika* in Kanarese, begun in 1865 but discontinued at the end of 1898, the editor and proprietor having fallen an early victim to plague.

The number of newspapers and periodicals published in the State in 1901 was 11 in English, 7 in the vernaculars, and 3 in both English and vernacular. A third of the whole treat of politics. There are five English papers with a circulation of from 200 to 500, the principal being the *Daily Post* (Bangalore). All these give general news. Of the Kanarese papers, the Wesleyan *Vrittānta Patrika* (Mysore weekly) and *Mahilāsakhi* for women (Mysore monthly) have considerable circulations. Their *Harvest Field* (Mysore monthly) in English is also popular. The *Nadegannadi* (Bangalore), *Sūryodaya* (Bangalore), *Vrittānta Chintāmani* (Mysore), are Kanarese weeklies, with circulations varying from 1,000 to 500, and give general and political news. In Hindustāni are the *Kāsim-ul-Akhbār* (bi-weekly), and the *Edward Gazette*, an old paper under a new name (weekly), both published in Bangalore, and treating of general and political news. The Tamil paper is the *Tāraka* (Bangalore bi-weekly), with a circulation of 200. Of the Kanarese monthly periodicals, *Vidyādāyini* is a journal of education. *Karnātaka Granthamālā* publishes new works, and *Karnātaka Kāvyakalānidhi* prints old unpublished works. All these are issued in Mysore city.

The number of books registered in 1901 was 30, exclusive of official publications, such as the volumes of inscriptions issued by the Archaeological department. There were 3 in English, 23 in Kanarese, 1 in Telugu, and 3 in Sanskrit and Kanarese. The subjects chiefly treated of come under the heads of religion, fiction, and history. The principal original works were four, of which two were based on the Rāmāyana story, one was an allegory on virtue and vice, and the other was a composition by a wife of the Mahārājā who died in 1868, on the reputed marriage of a Musalmān princess of Delhi to Cheluvarāya or Krishna, the god at Melukote, said to have taken place in the thirteenth century.

Medical.

The Victoria (opened 1900) in Bangalore city, the Bowring in the Civil and Military Station, and the General Hospitals at Mysore and Shimoga, are first-class hospitals. Before the Victoria was opened, St. Martha's Hospital, founded by the Lady Superior of the Convent of the Good Shepherd, took the place of a civil hospital for Bangalore city. Second-class hospitals exist at the District head-quarters, and Local fund dispensaries at all *tāluk* head-quarters and large towns. A Medical School was established in 1882 for training subordinates, but was given up in 1886 in favour of paying students to attend the large and well-equipped Medical Colleges at Madras and Bombay. A local medical service was organized in 1884 and improved in 1897.

For women and children there are the Mahārāni's Hospital at Mysore, the Maternity at Bangalore, the Lady Curzon in connexion

with the Bowring, and the Gosha Hospital of the Zanāna Mission. Native midwives are supplied to all the *tāluks*, who have been trained in the Lying-in Hospital at Madras, or in classes at the hospitals in Bangalore and Mysore city.

MEDICAL STATISTICS

	1881.	1891.	1901.	1904.
Hospitals, &c.				
Number of civil hospitals and dispensaries	24	99	134	135
Average daily number of—				
(*a*) In-patients	199·87	177·14	422·39	690·05
(*b*) Out-patients	1,463·92	3,740·41	6,412·17	5,985·75
Income from—				
(*a*) Government payments . Rs.	62,257	87,625	2,74,389	3,57,507
(*b*) Local and municipal payments . Rs.	5,556	40,642	52,568	55,862
(*c*) Fees, endowments, and other sources . Rs.	...	...	148	662
Expenditure on—				
(*a*) Establishment . Rs.	41,741	86,415	2,18,122	2,47,842
(*b*) Medicines, diet, buildings, &c. . Rs.	27,072	41,852	1,08,983	1,66,199
Lunatic Asylums.				
Number of asylums	1	1	1	1
Average daily number of—				
(*a*) Criminal lunatics	8·93	24·19	40·43	40·15
(*b*) Other lunatics	131·07	160·81	217·57	237·80
Income from—				
(*a*) Government payments . Rs.	...	...	...	25,590
(*b*) Fees and other sources . Rs.	...	24	134	317
Expenditure on—				
(*a*) Establishment . Rs.	15,831	4,986	6,074	4,786
(*b*) Diet, buildings, &c. . Rs.	...	11,795	21,148	21,121
Vaccination.				
Number of successful operations	79,375	90,075	66,183	60,731
Total expenditure on vaccination Rs.	10,998	24,381	20,822	21,109
Cost per successful case . Rs.	0-1-9	0-4-8	0-5-1	0-7-8

NOTE.—The figures do not include the Civil and Military Station of Bangalore. The drop in vaccination in 1901 is the effect of plague.

There is a Lunatic Asylum at Bangalore, in which at the end of 1903 there were 228 male and 86 female patients. During the year 24 were discharged as cured, and 11 as improved, while 23 died. The lunatics are employed in weaving cloth and *kamblis*, spinning, and gardening. In the Leper Asylum there were 11 male and 6 female lepers.

For vaccination there are 96 *tāluk* and 9 municipal vaccinators, besides the medical subordinates, and supervision is exercised by

9 inspectors. Vaccination is compulsory among State servants and school children[1]. Owing to the difficulties in the way of procuring good infant lymph for vaccination, a Vaccine Institute was established at Bangalore in 1892 for preparing lymph from the calf, in lanoline.

In 1896 an Eye Infirmary was established, and in 1899 a well-equipped Bacteriological Institute. Quinine was sold in 1904 in 3,426 packets, containing 102 powders of five grains each, at 418 post offices. The dose was raised in 1905 to seven grains, and it is proposed to sell through the village officials as well.

Sanitation has received special attention in the towns; but in villages only the improvement and conservancy of the water-supply have been looked to, and the removal of manure pits from the immediate proximity of the dwellings insisted upon. The peremptory evacuation of villages on the occurrence of plague has inclined the people in some parts to build and permanently remain on the spots in their fields where they have been camped.

Surveys.

The topographical survey of the State was completed in 1886. The revenue survey was commenced in 1863 and the settlement brought to an end in 1901. The system followed is that of Bombay, as already explained (pp. 214, 234). The area surveyed includes the whole of the State, or 29,433 square miles. The maintenance of the survey records is also the duty of the Survey department.

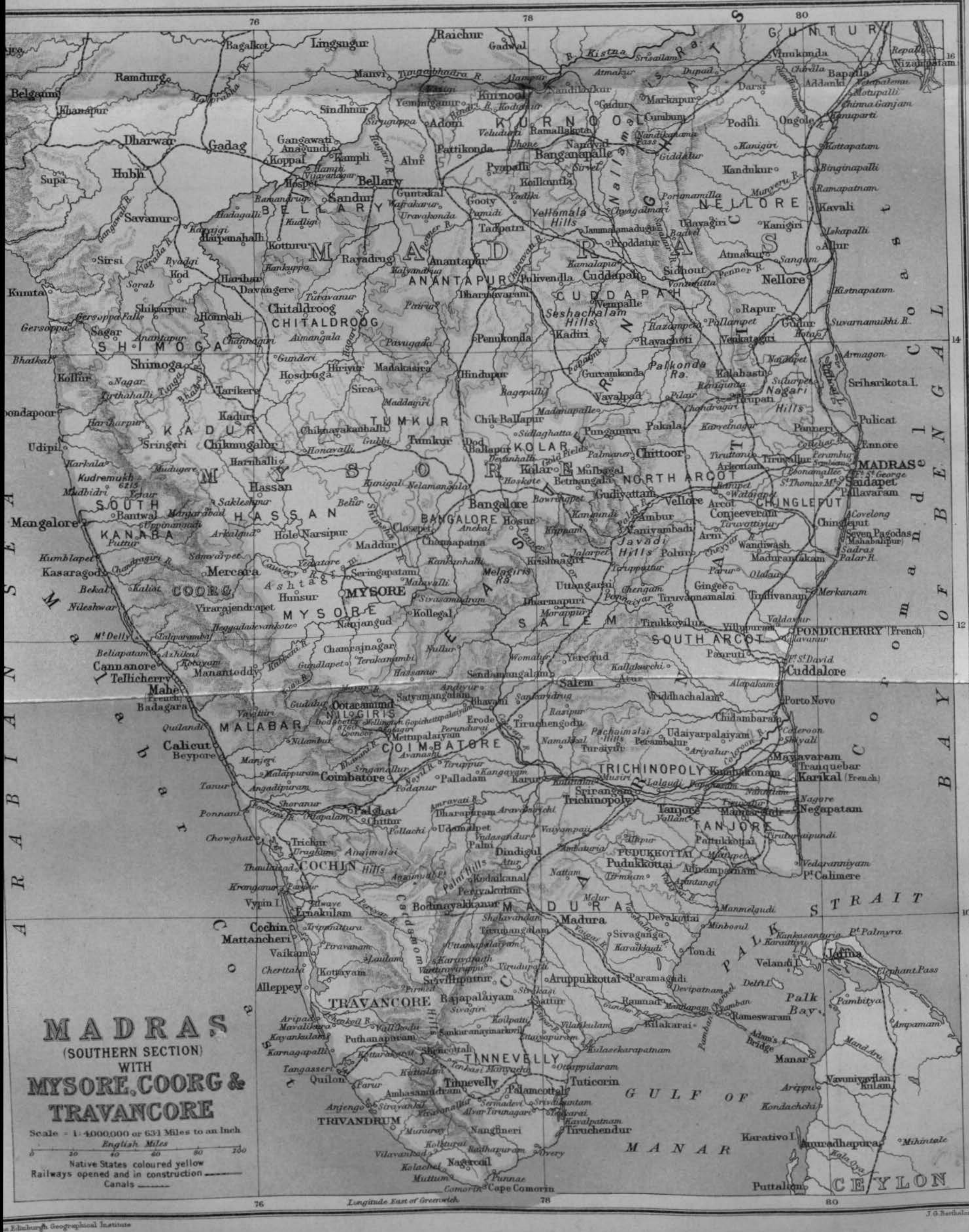
[B. Lewis Rice: *Mysore* (revised edition, 1897).—Lewin B. Bowring: *Haidar Alī and Tipū Sultān* (Rulers of India series, 1893); *Eastern Experiences* (1871).—Dr. Francis Buchanan: *A Journey from Madras through the Countries of Mysore, Canara, and Malabar* (1807; Madras reprint, 1870).—Major Mark Wilks: *Historical Sketches of the South of India, in an Attempt to trace the History of Mysoor* (3 vols., 1810–17; Madras reprint, 1869).]

Mysore District.—District in the south of the State of Mysore, lying between 11° 36′ and 13° 3′ N. and 75° 55′ and 77° 20′ E., with an area of 5,496 square miles. It is bounded on the north by Hassan and Tumkūr Districts; on the east by Bangalore and the Coimbatore District of Madras; on the south by the Nīlgiri and Malabar Districts of Madras; and on the west by Coorg.

Physical aspects.

The river CAUVERY, besides forming the boundary for some distance both on the west and east, traverses the District from north-west to east, receiving as tributaries the Hemāvati, Lokapāvani, and Shimsha on the north, and the Lakshmantīrtha, Kabbani, and Honnu-hole or Suvarnāvati on the south. Lofty mountain ranges covered with vast forests, the home

[1] A Regulation passed in 1906 makes vaccination compulsory throughout 'notified areas.'



Edinburgh Geographical Institute
J. G. Bartholomew

of the elephant, shut in the western, southern, and some parts of the eastern frontier. The only break in this mighty barrier is in the south-east, where the Cauvery takes its course towards the lowlands and hurls itself down the Cauvery Falls, called Gagana Chukki and Bhar Chukki, at the island of Sivasamudram. The principal range of hills within the District is the BILIGIRI-RANGAN in the south-east, rising to 5,091 feet above the level of the sea. Next to these, the isolated hills of Gopālswāmi in the south (4,770 feet), and of Bettadpur in the north-west (4,389 feet), are the most prominent heights, with the Chāmundi hill (3,489 feet) to the south-east of Mysore city. The French Rocks (2,882 feet), north of Seringapatam, are conspicuous points of a line culminating in the sacred peak of Melukote (3,579 feet). Short ranges of low hills appear along the south, especially in the south-west. On the east are encountered the hills which separate the valleys of the Shimsha and Arkāvati, among which KABBĀLDURGA (3,507 feet) has gained an unenviable notoriety for unhealthiness.

Mysore District may be described as an undulating table-land, fertile and well watered by perennial rivers, whose waters, dammed by noble and ancient anicuts, enrich their banks by means of canals. Here and there granite rocks rise from the plain, which is otherwise unbroken and well wooded. The extreme south forms a *tarai* of dense and valuable but unhealthy forest, occupying the depression which runs along the foot of the Nīlgiri mountains. The lowest part of this is the remarkable long, steep, trench-like ravine, sometimes called the Mysore Ditch, which forms the boundary on this side, and in which flows the Moyār. The irrigated fields, supplied by the numerous channels drawn from the Cauvery and its tributaries, cover many parts with rich verdure. Within this District alone there are twenty-seven dams, the channels drawn from which have a total length of 807 miles, yielding a revenue of $5\frac{1}{3}$ lakhs.

The geological formation is principally of granite, gneiss, quartz, and hornblende. In many places these strata are overlaid with laterite. Stone for masonry, principally common granite, is abundant throughout the District. Black hornblende of inferior quality and potstone are also found. Quartz is plentiful, and is chiefly used for road-metalling. Dikes of felsites and porphyries occur abundantly in the neighbourhood of Seringapatam, and a few elsewhere. They vary from fine-grained hornstones to porphyries containing numerous phenocrysts of white to pink felspar, in a matrix which may be pale green, pink, red, brown, or almost black. The majority of the porphyries form handsome building stones, and some have been made use of in the new palace at Mysore. Corundum occurs in the Hunsūr *tāluk*. In Singaramāran-halli the corundum beds were found to be associated with an intrusion of olivine-bearing rocks, similar to those of the Chalk Hills near Salem,

and large masses of a rock composed of a highly ferriferous enstatite, with magnetite and iron-alumina spinel or hercynite.

The trees in the extensive forest tract along the southern and western boundary are not only rich in species, but attain a large size. Of teak (*Tectona grandis*) there are several large plantations. Other trees include *Shorea Talura*, *Pterocarpus Marsupium*, *Terminalia tomentosa*, *Lagerstroemia lanceolata*, and *Anogeissus latifolia*, which are conspicuous and very abundant in the Muddamullai forest. In February most of these trees are bare of leaf, and represent the deciduous belt. In open glades skirting the forests and descending the Bhandipur *ghāt* are plants of a varied description. *Bambusa arundinacea* occurs in beautiful clumps at frequent intervals. There are also *Helicteres Isora*, *Hibiscus Abelmoschus*, and many others. *Capparis grandiflora* is most attractive in the Bhandipur forest, and there is also a species without thorns. Clusters of parasites, such as *Viscum orientale*, hang from many trees. On the Karabi-kanave range farther north the grasses *Andropogon pertusus* and *Anthistiria ciliata* attain an abnormal size, and are often difficult to penetrate. Ferns, mosses, and lichens are abundant in the rainy season. There are also a few orchids. The heaviest forest jungle is about Kākankote in the south-west. The BILIGIRI-RANGAN range in the south-east possesses an interesting flora with special features. The growth includes sandal-wood, satin-wood (*Chloroxylon Swietenia*), *Polyalthia cerasoides*, and others. The *babūl* (*Acacia arabica*) attracts attention by the road-side and in cultivated fields. Hedgerows of *Euphorbia Tirucalli*, *Jatropha Curcas*, and *Vitex Negundo* are not uncommon. In the poorest scrub tracts *Phoenix farinifera* is often gregarious. The growth in the parks at Mysore city is not so luxuriant as at Bangalore, where the soil is richer; but in the matter of species it is much the same. The flora of Chāmundi, which is a stony hill, is limited in species and poor in growth. Clinging to the rivers and canals are found such plants as *Crinum zeylanica*, *Salix tetrasperma*, and *Pandanus odoratissimus*.

The mean temperature and diurnal range at Mysore city in January are 73° and 25°; in May, 81° and 23°; in July, 75° and 16°; in November, 73° and 18°. The climate is generally healthy, but intermittent fevers prevail during the cold months. The annual rainfall averages 33 inches. The wettest month is October, with a fall of 8 inches; then May, with 6; and next September, with 5 inches.

History.

The earliest traditional knowledge we have relating to this District goes back to the time of the Maurya emperor, Chandra Gupta, in the fourth century B.C. At that time a State named Punnāta occupied the south-west. After the death of Bhadrabāhu at Sravana Belgola, the Jain emigrants whom he had led from Ujjain in the north, Chandra Gupta being his chief disciple

passed on to this tract. It is mentioned by Ptolemy, and its capital Kitthipura has been identified with Kittūr on the Kabbani, in the Heggadadevankote *tāluk*. The next mention concerns Asoka, who is said to have sent Buddhist missionaries in 245 B.C. to Vanavāsi on the north-west of the State, and to Mahisa-mandala, which undoubtedly means the Mysore country. After the rise of the Ganga power, their capital was established in the third century A.D. at Talakād on the Cauvery. They are said to have had an earlier capital, at Skandapura, supposed to be Gazalhatti, on the Moyār, near its junction with the Bhavāni; but this is doubtful. In the fifth century the Ganga king married the Punnāta king's daughter, and Punnāta was soon after absorbed into the Ganga kingdom. In the eighth century the Rāshtrakūtas overcame and imprisoned the Ganga king, appointing their own viceroys over his territories. But he was eventually restored, and intermarriages took place between the two families. In the tenth century the Ganga king assisted the Rāshtrakūtas in their war with the Cholas. In 1004 the Cholas invaded Mysore under Rājendra Chola, and, capturing Talakād, brought the Ganga power to an end. They subdued all the country up to the Cauvery, from Coorg in the west to Seringapatam in the east, and gave to this District the name Mudikondacholamandalam.

Meanwhile the Hoysalas had risen to power in the Western Ghāts, and made Dorasamudra (Halebīd in Hassan District) their capital. About 1116 the Hoysala king, Vishnuvardhana, took Talakād and expelled the Cholas from all parts of Mysore. He had been converted from the Jain faith by the Vaishnava reformer Rāmānuja, and bestowed upon him the ASHTAGRĀMA or 'eight townships,' with all the lands north and south of the Cauvery near Seringapatam. The Hoysalas remained the dominant power till the fourteenth century. The Muhammadans from the north then captured and destroyed Dorasamudra, and the king retired at first to Tondanūr (Tonnūr, north of Seringapatam). But in 1336 was established the Vijayanagar empire, which speedily became paramount throughout the South. One of the Sāluva family, from whom the short-lived second dynasty arose, is said to have built the great temple at Seringapatam. But Narasinga, the founder of the Narasinga or third dynasty, seized Seringapatam about 1495 by damming the Cauvery and crossing over it when in full flood. Later on, Ganga Rājā, the Ummattūr chief, rebelled at Sivasamudram and was put down by Krishna Rāya, in 1511. Eventually the Mysore country was administered for Vijayanagar by a viceroy called the Srī Ranga Rāyal, the seat of whose government was at Seringapatam. Among the feudal estates under his control in this part were Mysore, Kalale, and Ummattūr in the south, and the Changālva kingdom in the west. After the overthrow of Vijayanagar by the Muhammadans

in 1565, the viceroy's authority declined, and the feudatories began to assume independence. At length in 1610 he retired, broken down in health, to die at Talakād, and Rājā Wodeyar of Mysore gained possession of Seringapatam. This now became the Mysore capital, and the lesser estates to the south were absorbed into the Mysore kingdom. Seringapatam was several times besieged by various enemies, but without success. From 1761 to 1799 the Mysore throne was held by the Muhammadan usurpers, Haidar Alī and Tipū Sultān. During this period several wars took place with the British, in the course of which Haidar Alī died and finally Tipū Sultān was killed. The Mysore family was then restored to power by the British, and Mysore again became the capital in place of Seringapatam. Owing to continuous misrule, resulting in a rebellion of the people, the Mysore Rājā was deposed in 1831 and the country administered by a British Commission. This continued till 1881, when Mysore was again entrusted, under suitable guarantees, to the ancient Hindu dynasty.

Of architectural monuments the principal one is the Somnāthpur temple, the best existing complete example of the Chālukyan style. It was built in 1269, under the Hoysalas. It is a triple temple, and Fergusson considered the sculpture to be more perfect than at Belūr and Halebīd. Other notable examples of the same style are the temples at Basarālu, built in 1235, and one at Kikkeri, built in 1171. The tall pillars of the temple in Agrahāra Bāchahalli are of interest. They are of the thirteenth century, and on the capital of each stands the figure of an elephant, with Garuda as the *mahaut*, and three or four people riding on it. As good examples of the Dravidian style may be mentioned the temples at Seringapatam, Nanjangūd, and on the Chāmundi hill. Of Muhammadan buildings the most noteworthy are the Gumbaz or mausoleum of Haidar and Tipū at Ganjam, and the Daryā Daulat summer palace at Seringapatam. Of the latter, Mr. Rees, who has travelled much in Persia and India, says:—

'The lavish decorations, which cover every inch of wall from first to last, from top to bottom, recall the palaces of Ispahān, and resemble nothing that I know in India.'

Attention may also be directed to the bridges of purely Hindu style and construction at Seringapatam and Sivasamudram. The numerous inscriptions of the District have been translated and published.

Population.

The population at each Census in the last thirty years was: (1871) 1,104,808, (1881) 1,032,658, (1891) 1,181,814, and (1901) 1,295,172. The decrease in 1881 was due to the famine of 1876-8. By religion, in 1901 there were 1,232,958 Hindus, 49,484 Musalmāns, 6,987 Animists, 3,707 Christians, 2,006 Jains, and 30 Pārsīs. The density of population was 235 persons per square mile, that for the State being 185. The number of towns

is 27, and of villages 3,212. Mysore, the chief town (population, 68,111), is the only place with more than 20,000 inhabitants.

The following table gives the principal statistics of population in 1901:—

Tāluk.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Mysore	306	1	163	133,840	438	− 0.6	14,858
Hunsūr	660	2	412	115,928	176	+ 2.3	3,280
Yedatore	236	3	177	82,330	349	+ 10.9	2,915
Krishnarājpet	425	2	373	102,816	242	+ 12.4	3,141
Nāgamangala	401	1	366	76,581	191	+ 10.6	2,449
Mandya	450	2	300	115,574	257	+ 15.8	3,204
Seringapatam	274	4	210	88,691	323	+ 4.0	4,580
Malavalli	391	1	231	101,779	260	+ 18.5	2,531
Tirumakūdal-Narsipur	225	4	125	87,680	389	+ 9.0	2,627
Nanjangūd	384	2	206	108,173	281	+ 12.5	3,034
Yelandūr *jāgīr*	102	1	27	35,271	345	+ 11.1	1,145
Chāmrājnagar	487	1	190	110,196	226	+ 14.9	3,582
Gundalpet	535	1	155	74,897	137	+ 19.7	2,199
Heggadadevan-kote	620	2	276	61,416	99	+ 0.3	1,726
District total	5,496	27	3,211	1,295,172	235	+ 9.6	51,271

The Wokkaligas or cultivators are the strongest caste in numbers, their total being 320,000. Next come the outcaste Holeyas and Mādigas, of whom there are 194,000 and 25,000; the Lingāyats, numbering 173,000; Kurubas or shepherds, 127,000; Besta or fishermen, 10,200. The total of Brāhmans is 43,000. Among Musalmāns, the Sharīfs form nearly seven-tenths, being 29,000. The nomad Korama number 2,500; wild Kuruba, 2,300; and Iruliga, 1,600. About 74 per cent. of the total are engaged in agriculture and pasture; 8 per cent. each in unskilled labour not agricultural, and in the preparation and supply of material substances; 2.5 per cent. in the State service, and 2.4 per cent. in personal services; 1.9 per cent. in commerce, transport, and storage; and 1.8 per cent. in professions.

The Christians in the District number 3,700, of whom 2,200 are in Mysore city. The total includes 3,300 natives. Early in the eighteenth century a Roman Catholic chapel was built at Heggadadevankote, but the priest was beaten to death by the people. A chapel at Seringapatam, which was courageously defended by the Christian troops, escaped the destruction of all Christian churches ordered by Tipū Sultān. After the downfall of the latter in 1799, the well-known Abbé Dubois took charge, and founded the mission at Mysore, where large churches, schools, and convents are in existence. The London

and Wesleyan Missions began work at Mysore in 1839, but the former retired in 1850. The Wesleyans have churches, a college, schools for boys and girls, and a printing press, and are building a large hospital for women and children.

Agriculture.

Red soil prevails throughout the District, while one of the most valuable tracts of the more fertile black soil in the country runs through the south-east in the Chāmrājnagar *tāluk* and the Yelandūr *jāgīr*.

The following table gives statistics of cultivation in 1903-4:—

Tāluk.	Area, in square miles, shown in the revenue accounts.				
	Total.	Cultivated.	Irrigated.	Forests.	Cultivable waste.
Mysore	260	153	5	1	12
Hunsūr	620	213	15	76	32
Yedatore	200	145	28	1	3
Krishnarājpet	372	182	23	6	13
Nāgamangala	372	157	9	12	10
Mandya	412	225	21	...	11
Seringapatam	246	139	34	11	10
Malavalli	329	175	7	50	1
Tirumakūdal-Narsipur	167	125	21	...	1
Nanjangūd	314	190	18	15	5
Chāmrājnagar	398	161	20	99	3
Gundalpet	544	167	2	177	3
Heggadadevankote	592	118	6	199	13
Total	4,826	2,150	209	647	117

The crops, both 'wet' and 'dry,' are classed under two heads, according to the season in which they are grown, *hain* and *kār*. The season for sowing both 'wet' and 'dry' *hain* crops opens in July, that for sowing *kār* 'wet crops' in September, and for *kār* 'dry crops' in April. It is only near a few rain-fed tanks in the east that both *hain* and *kār* crops are now obtained from the same 'wet' lands in the year. On 'dry' lands it is usual to grow two crops in the year, the second being a minor grain, if the land is fertile enough to bear it. But of grains which form the staple food, such as *rāgi* and *jola*, the land will only produce one crop as a rule, and consequently the ryots are obliged to choose between a *hain* or *kār* crop. In the north the former is preferred, because the growth is there more influenced by the monsoon. But in the south a *kār* crop is found more suitable, because the springs and frequent rain afford a tolerable supply of water all the year round, whereas the south-west monsoon, which falls with greater force on the forest land, would render ploughing in June laborious. *Rāgi* in 1903-4 occupied 873 square miles; gram, 521; other food-grains, 560; rice, 184; oilseeds, 159; garden produce, 27; sugar-cane, 10.

Coffee cultivation has been tried, the most successful being in the

Biligiri-Rangan region. Much attention has been paid to mulberry cultivation in the east, in connexion with the rearing of silkworms. During the twelve years ending 1904 Rs. 29,000 was advanced as agricultural loans for land improvement, and Rs. 16,500 for field embankments.

The area irrigated from canals is 122 square miles, from tanks and wells 72, and from other sources 15. The length of channels drawn from rivers is 807 miles, and the number of tanks 1,834, of which 157 are classed as 'major.'

The south and west are occupied by continuous heavy forest, described in the paragraph on Botany. The State forests in 1904 covered an area of 521 square miles, 'reserved' lands 81, and plantations 8. Teak, sandal-wood, and bamboos, with other kinds of timber, are the chief sources of forest revenue. The forest receipts in 1903–4 amounted to nearly 5 lakhs.

Gold-mining, experimentally begun at the Amble and Wolagere blocks near Nanjangūd, has been abandoned. Prospecting for gold has also been tried near Bannūr. Iron abounds in the rocky hills throughout the District, but is worked only in the Heggadadevankote and Malavalli *tāluks*. The iron of Malavalli is considered the best in the State. Stones containing magnetic iron are occasionally turned up by the ploughshare near Devanūr in the Nanjangūd *tāluk*. Talc is found in several places, and is used for putting a gloss on baubles employed in ceremonies. It occupies the rents and small veins in decomposing quartz, but its laminae are not large enough to serve for other purposes. Asbestos is found in abundance in the Chāmrājnagar *tāluk*. Nodules of flint called *chakmukki* are found in the east, and were formerly used for gun-flints.

Trade and communications.

Cotton cloth, blankets, brass utensils, earthenware, and jaggery (unrefined sugar) from both cane and date, are the principal manufactures. There is also some silk-weaving. The best cloth is made at Mysore and Ganjam. At Hunsūr factories were formerly maintained in connexion with the Commissariat, consisting of a blanket factory, a tannery and leather factory, and a wood-yard where carts and wagons were built. Although these have been abolished, their influence in local manufactures remains. Nearly all the country carts of the District are made here. There are also extensive coffee-works and saw-mills, under European management. The number of looms or small works reported for the District are: silk, 50; cotton, 4,267; wool, 2,400; other fibres, 862; wood, 200; iron, 360; oil-mills, 857; sugar and jaggery mills, 360.

A great demand exists for grain required on the west coast and in Coimbatore, and the Nīlgiri market derives a portion of its supplies from this District. There is also considerable trade with Bangalore

and Madras. Many of the traders are Musalmāns, and on the Nīlgiri road Lambānis are largely employed in trade. The large merchants, who live chiefly in Mysore city, are for the most part of the Kunchigar caste. They employ agents throughout the District to buy up the grain, in many cases giving half the price in advance before the harvest is reaped. A few men with capital are thus able to some extent to regulate the market. Much of the trade of the country is carried on by means of weekly fairs, which are largely resorted to; and at Chunchankatte in the Yedatore *tāluk* there is an annual fair which lasts for a month. Upon these the rural population are mainly dependent for supplies. The most valuable exports are grain, oilseeds, sugar, and jaggery; and the most valuable imports are silk cloths, rice, salt, piece-goods, *ghī*, cotton and cotton thread, and areca-nuts.

The Mysore State Railway from Bangalore to Nanjangūd runs for 61 miles through the District from the north-east to the centre. The length of Provincial roads is 330 miles, and of District fund roads 539 miles.

Famine.

The District is virtually secured against famine by the extensive system of irrigation canals drawn from the Cauvery and its tributaries. In 1900 some test works for relief were opened for a short time in the Mandya *tāluk*.

Administration.

The District is divided into fourteen *tāluks*: CHĀMRĀJNAGAR, GUNDALPET, HEGGADADEVANKOTE, HUNSŪR, KRISHNARĀJPET, MALAVALLI, MANDYA, MYSORE, NĀGAMANGALA, NANJANGŪD, SERINGAPATAM, TIRUMAKŪDAL-NARSIPUR, YEDATORE, and the YELANDŪR *jāgīr*. It is under a Deputy-Commissioner, and subject to his control the *tāluks* have been formed into the following groups in charge of Assistant Commissioners: Mysore, Seringapatam, Mandya, and Malavalli, with head-quarters at French Rocks; Nāgamangala and Krishnarājpet, with head-quarters at Krishnarājpet; Chāmrājnagar, Nanjangūd, Gundalpet, and Tirumakūdal-Narsipur, with head-quarters at Nanjangūd; Heggadadevankote, Hunsūr, and Yedatore, with head-quarters at Mysore city.

There are District and Subordinate Judge's courts at Mysore city, whose jurisdiction extends over Hassan District, besides two Munsifs' courts; in addition, there are Munsifs at Seringapatam and Nanjangūd. Dacoity is not infrequent.

The land revenue and total revenue are shown below, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue .	10,03	15,65	19,01	19,20
Total revenue .	15,00	29,06	33,40	34,75

The revenue survey and settlement were introduced in the west in 1884, in the north and east between 1886 and 1890, in the south between 1891 and 1896. The incidence of land revenue per acre of cultivated area in 1903–4 was Rs. 1–4–6. The average assessment per acre on 'dry' land is R. 0–12–1 (maximum scale Rs. 2–4, minimum scale R. 0–1); on 'wet' land, Rs. 5–3–11 (maximum scale Rs. 11, minimum scale R. 0–4); on garden land, Rs. 3–15–6 (maximum scale Rs. 15, minimum scale Rs. 1–8).

In 1903–4, besides the Mysore city municipal board, there were seventeen municipalities—Hunsūr, Chāmrājnagar, Yedatore, Heggadadevankote, Gundalpet, Nanjangūd, Tirumakūdal-Narsipur, Piriyāpatna, Bannūr, Talakād, Seringapatam, Mandya, Krishnarājpet, Malavalli, Nāgamangala, Melukote, and French Rocks—with a total income of Rs. 47,000, and an expenditure of Rs. 42,000; and also 8 village Unions, converted in 1904 from previously existing minor municipalities—Sargūr, Sosale, Sāligrāma, Mirle, Kalale, Maddūr, Pālhalli, and Kikkeri—with a total income and expenditure of Rs. 10,000 and Rs. 18,000. Outside the municipal areas, local affairs are managed by the District and *tāluk* boards, which had an income of 1·5 lakhs in 1903–4 and spent 1·1 lakhs, including Rs. 86,000 on roads and buildings.

The police force in 1903–4 included 2 superior officers, 181 subordinate officers, and 1,210 constables. Of these, 46 officers and 275 constables formed the city police; and 3 officers and 49 constables the special reserve. The Mysore District jail has accommodation for 447 prisoners. The daily average in 1904 was 200. In the 14 lock-ups the average daily number of prisoners was 17.

The percentage of literate persons in 1901 was 20·1 for the city and 3·1 for the District (7·3 males and 0·6 females). The number of schools increased from 675 with 22,346 pupils in 1890–1 to 778 with 23,126 pupils in 1900–1. In 1903–4 there were 766 schools (458 public and 308 private), with 22,853 pupils, of whom 3,379 were girls.

Besides the general hospital at Mysore city, there are 23 dispensaries in the District, at which 250,000 patients were treated in 1904, of whom 2,300 were in-patients, the number of beds available being 69 for men and 60 for women. The total expenditure was Rs. 82,000.

The number of persons vaccinated in 1904 was 13,896, or 11 per 1,000 of the population.

Mysore Tāluk.—Central *tāluk* of Mysore District, Mysore State, lying between 12° 7′ and 12° 27′ N. and 76° 28′ and 76° 50′ E., with an area of 306 square miles. The population in 1901 was 133,840, compared with 134,684 in 1891, the decrease being chiefly due to plague. The *tāluk* contains MYSORE CITY (population, 68,111), the head-quarters; and 163 villages. The land revenue demand in 1903–4

was Rs. 1,40,000. The north-west angle is bounded by the Cauvery and Lakshmantīrtha, but the main drainage flows south to the Kabbani. The country is undulating, and the principal height is the Chāmundi hill (3,489 feet). Channels from the Cauvery and Lakshmantīrtha irrigate some villages in the east and north-west. There are many tanks. The 'wet' lands have generally very good soil. The 'dry' lands vary, but are mostly shallow and stony. Coco-nut, areca-nut, betel-vines, plantains, and vegetables are largely grown round the city.

Mysore City.—The dynastic capital of the Mysore State, and residence of the Mahārājā; also head-quarters of the District and *tāluk* of the same name. It is situated in 12° 18′ N. and 76° 40′ E., at the north-west base of the Chāmundi hill, on the Mysore State Railway. The population fell from 74,048 in 1891 to 68,111 in 1901, the decrease being due to plague. The city covers an area of 7½ square miles, and is divided into seven *muhallas*: namely, the Fort, Lashkar, Devarāj, Krishnarāj, Mandi, Chāmarāj, and Nazarābād. The original city was built in a valley formed by two ridges running north and south. In recent years it has been completely transformed by extensions to the north and west, and by the erection of many fine public buildings; but the old parts were very crowded and insanitary. A special Board of Trustees for improvements was formed in 1903, and Mysore promises to become a very handsome city in course of time. It is administered by a municipality, which in 1903-4 had an income of 2·2 lakhs, of which 1·2 lakhs was derived from taxes and Rs. 65,000 from octroi. The expenditure was 2·2 lakhs, including Rs. 39,000 on public works, Rs. 31,000 on conservancy, and Rs. 10,000 on education and charitable grants. Even in the past important sanitary measures have been carried out. In 1886 a complete system of drainage was provided for the fort, and the precincts of the palace were opened out and improved. One of the most beneficial undertakings was the filling in of the portentous great drain known as Pūrnaiya's Nullah, originally excavated in the time of that minister with the object of bringing the water of the sacred Cauvery into Mysore. It did not fulfil this purpose, and simply remained a very deep and large noisome sewer. Its place has now been taken by a fine wide road, called (after the Gaikwār of Baroda) the Sayāji Rao Road, flanked on either side by ranges of two-storeyed shops of picturesque design, called the Lansdowne Bazars. At the same time a pure water-supply was provided by the formation of the Kukarhalli reservoir towards the high ground on the west, from which water was laid on to all parts of the city in iron mains. This has since been supplemented by a high-level reservoir, the water in which is drawn from the Cauvery river near Anandūr, and forced up with the aid of turbines erected there. The new quarter, called (after the late Mahārājā) Chāmarājapura, more than

doubled the area of the city. Conspicuous on the high ground to the west are the public offices, surmounted by a dome, standing in the wooded grounds of Gordon Park. Other prominent buildings in the vicinity are the Victoria Jubilee Institute, the Mahārājā's College, and the Law Courts. In 1897 the old palace in the fort was partially destroyed by fire; and this has given occasion for the erection of a new palace on the same spot of more modern design, constructed of durable and less combustible materials. The opportunity has been taken to introduce some of the handsome porphyries and other ornamental stones found in Mysore, and stone-carvings on the lines of the famous ancient sculptured temples of the State are being used. Altogether, the new palace now approaching completion bids fair to be notable for its architecture and decorative features. The fort, which is the original nucleus of the city, is quadrangular, three of the sides being about 450 yards in length, and the remaining or south side somewhat longer. The palace in the interior was crowded round with houses, principally occupied by retainers. But open spaces have now been formed, and further improvements will follow the completion of the new building.

Mysore itself (properly Mahisūr, 'buffalo town') is no doubt a place of great antiquity, as it gave its name to the country as Mahisa-mandala in the time of Asoka in the third century B.C., and appears as Māhishmati in the Mahābhārata. Maisūrnād is mentioned in inscriptions of the eleventh and twelfth centuries. The original fort is said to have been built in 1524. But the modern city, even before the extensive rebuilding of recent years, could not boast of any great age. Though Mysore was the ancestral capital of the State, it was superseded by Seringapatam, which was the seat of the court from 1610 till the downfall of Tipū Sultān in 1799. The latter ruler had demolished the fort, and conveyed the stones to a neighbouring site called Nazarābād, where he intended to erect a new fort. On the restoration of the Hindu Rāj in 1799, the stones were taken back and the fort rebuilt. At the same time the recently destroyed palace was erected, and the court removed to Mysore. Thus few standing remains can claim to be older than about a hundred years. Interesting buildings are the house occupied by Colonel Wellesley (the future Duke of Wellington), and the Residency (now called Government House), erected in 1805 in the time of Sir John Malcolm by Major De Havilland. This has lately been much altered and extended.

Nabadwīp (or Nadiā).—Ancient capital of Nadiā District, Bengal, situated in 23° 24′ N. and 88° 23′ E., in the head-quarters subdivision, on the west bank of the Bhāgīrathi. Population (1901), 10,880, including 10,416 Hindus, 457 Muhammadans, and 7 Christians. This great preponderance of Hindus in a District where 59 per cent. of the

population are Musalmāns is significant. Nabadwīp is reputed to have been founded in the twelfth century by Lakshman Sen, son of Ballāl Sen, king of Bengal. It was captured by Muhammad-i-Bakhtyār Khiljī in 1203. It has long been famous for its sanctity and learning, and its *pandits* are still referred to on questions of Hindu religion and precedent. Here towards the end of the fifteenth century was born the great Vaishnava reformer, Chaitanya, in whose honour a festival, attended by some 8,000 or 10,000 pilgrims, is held annually in January–February. The famous *tols* or Sanskrit schools are referred to in the article on NADIĀ DISTRICT. The town was constituted a municipality under the name of Nadiā in 1869. The income during the decade ending 1901–2 averaged Rs. 7,000, and the expenditure Rs. 6,000. In 1903–4 the income was Rs. 9,100, mainly from a tax on persons (or property tax); and the expenditure was Rs. 8,400. The lodging-houses in the town are regulated under Bengal Act IV of 1871. Brass utensils are manufactured.

Nābha State.—One of the Phūlkiān States, Punjab. Its total area is 966[1] square miles; and it consists of two distinct parts, of which the larger lies between 30° 8′ and 30° 42′ N. and 74° 50′ and 76° 24′ E., while the second, which forms the *nizāmat* of Bāwāl, lies in the extreme south-east of the Punjab and is distinct in all respects from the rest of the State. The main portion comprises twelve separate pieces of territory, scattered among the other two Phūlkiān States of Patiāla and Jīnd, and contiguous with the British Districts of Ferozepore and Ludhiāna and the State of Māler Kotla on the north, and the District of Farīdkot on the west. This portion is divided into two administrative districts or *nizāmats*, which correspond with its natural divisions, the Amloh *nizāmat* lying in the fertile tract called the Pawādh, and the Phūl *nizāmat* in the vast arid tract called the Jangal or waste. Bāwal is geographically a part of the Rājputāna desert. The State contains no important streams; and the level plain over which its territories are scattered is broken, within the limits of the State, only by the shifting sandhills of Phūl and the low rocky eminences, outliers of the Arāvalli system, which stud the south of Bāwal.

Physical aspects.

The flora of Phūl and Amloh is that of the Central Punjab, approaching in the south-west that of the desert. In Bāwal it is the same as in the neighbouring States of Rājputāna. The fauna is the same as in the Patiāla plains and in Jīnd. Statistics are not available, but the rainfall is heaviest in Amloh and lightest in Bāwal. The climate of Bāwal and Phūl is dry, hot, and healthy. Amloh, with its

[1] These figures do not agree with the area given in Table III of the article on the PUNJAB and in the population table on p. 265 of this article, which is the area returned in 1901, the year of the latest Census. They are taken from more recent returns.

soil of rich loam and high spring-level, is the least salubrious part of the State.

History.

The earlier history of Nābha is that of the PHŪLKIĀN STATES, till it became a separate State in 1763. After the capture of the town of Sirhind by the confederate Sikhs in that year, the greater part of the old imperial province of the same name was divided among the Phūlkiān houses; and the country round Amloh fell to Hamīr Singh, then chief of Nābha, who thus became its Rājā. In 1774, however, Gajpat Singh, Rājā of Jīnd, wrested Sangrūr from his hands, and also took Amloh and Bhādson. The two last places were restored to the Rājā of Nābha on the intervention of Patiāla, but Sangrūr has ever since remained a part of the Jīnd State. In 1776 the Phūlkiān Rājās combined to resist the attack of the Muhammadan governor of Hānsi, who had been sent by the Delhi government to attack Jīnd; and after his defeat Rori fell to Hamīr Singh as his share of the conquests. In 1783 Hamīr Singh was succeeded by his minor son Jaswant Singh, the Rānī Desu, one of his widows, acting as regent till 1790. She recovered most of the territory which had been seized by Jīnd; and after the death of Gajpat Singh in 1789 the feud between the two powers was forgotten, while in 1798 a common danger compelled them to unite with the other Sikh chiefs and prepare to resist the invasion of Zamān Shāh Durrāni. While so engaged at Lahore, intelligence reached the Phūlkiān Rājās that the adventurer George Thomas was besieging Jīnd, and they hurried back to its relief. In the fighting that ensued the Sikhs were utterly defeated, and accused the Nābha chief of lukewarmness in the common cause; and it is certain that he took no part in the struggle. In 1801, however, Nābha was included in the treaty with General Perron, by which, in return for the expulsion of Thomas from their territories, the Cis-Sutlej chiefs agreed to submit to the Marāthās. In 1804 Jaswant Singh entered into friendly relations with Lord Lake; and when Holkar halted at Nābha in 1805, on his way to Lahore, the Rājā held to his engagement with the British and refused him assistance. War, however, soon after broke out between the Rānī of Patiāla on the one hand and the Rājās of Nābha and Jīnd on the other. Jaswant Singh was defeated and joined the Rājā of Jīnd in invoking the aid of Ranjīt Singh, who in 1806 crossed the Sutlej and halted at Nābha. Here he did little to reconcile the contending powers, but proceeded to dismember the Muhammadan State of Māler Kotla, assigning to Jaswant Singh portions of the Kot Basia, Talwandi, and Jagraon dependencies of that State, with part of Ghumgrāna. In 1807-8 Ranjīt Singh again made expeditions into the Cis-Sutlej States, and in 1808 Jaswant Singh received from him the principality of Khanna.

But in spite of the grants thus made, the policy of Ranjīt Singh

excited the deep distrust of the chiefs, who in 1809 threw themselves upon the protection of the British Government, and Ranjīt Singh desisted from all further attempts to extend his dominions south of the Sutlej. Jaswant Singh's ability had raised the State at this period to a high pitch of prosperity. It was well cultivated and the total revenue amounted to 1·5 lakhs. He was, however, involved in constant disputes with Patiāla concerning the boundaries of the two States, and his last years were embittered by the rebellions of his son, who predeceased him. On his death in 1840 he was succeeded by his only surviving son, Deoindar Singh, a timid and vacillating man, who during the first Sikh War in 1845 sympathized with the Sikh invaders, his conduct in regard to carriage and supplies required from him in accordance with treaty being dilatory and suspicious in the extreme. After the battles of Mudki and Ferozeshāh, however, supplies were sent in abundance, and when the final victory of Sobraon was gained the whole resources of the State were placed at the disposal of the British Government. An official investigation was made into the conduct of the chief, with the result that he was deposed, but received a pension of Rs. 50,000 a year. Nearly a fourth of the territory was also confiscated, a part of it being bestowed upon the Patiāla and Farīdkot States in reward for their loyalty. His eldest son, Bharpūr Singh, was placed in power in 1847. At the time of the Mutiny in 1857 this chief showed distinguished loyalty, and was rewarded by a grant of the territory which forms the present Bāwal *nizāmat*, then worth Rs. 1,06,000 per annum, on the usual condition of political and military service at any time of general danger. In addition, the *sanad* of 1860 conferred on the Nābha Rājā privileges similar to those conferred at the same time on the chiefs of Patiāla and Jīnd. Bharpūr Singh died in 1863, and was succeeded by his brother, Bhagwān Singh, who died without issue in 1871. By the *sanad* granted in 1860, it was provided that, in a case of failure of male heirs to any one of the three Phūlkiān houses, a successor should be chosen from among the descendants of Phūl by the two chiefs and the representative of the British Government; and Hīra Singh, the present Rājā, was accordingly selected. He was born about 1843. The Rājā is entitled to a salute of 15 guns, including 4 personal to the present chief.

Population.

The State contains 4 towns and 488 villages. Its population at the last three enumerations was: (1881) 261,824, (1891) 282,756, and (1901) 297,949. It is divided into three *nizāmats*: AMLOH and BĀWAL, with their head-quarters at the town from which each is named; and PHŪL, with its head-quarters at DHANAULA. NĀBHA is the capital of the State.

The following table shows the chief statistics of population in 1901:—

Nizāmat.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Amloh . .	291	1	228	115,078	395·2	+ 1·5	5,358
Phūl . . .	394	2	96	111,441	282·9	+ 10·7	5,476
Bāwal . . .	281	1	164	71,430	254·2	+ 4·7	1,576
State total	928	4	488	297,949	321	+ 5·4	12,410

NOTE.—The figures for the areas of *nizāmats* are taken from revenue returns. The total State area is that given in the *Census Report*.

More than 54 per cent. of the population are Hindus, only 26 per cent. being Sikhs, though Nābha ranks as one of the principal Sikh States of the Punjab. The Sikhs are mainly Jats by tribe, and are found mostly in the Phūl *nizāmat*, a tract which came under the influence of the great Sikh Gurūs. Amloh contains a number of Sikhs of the Sultāni sect, but the Jats of Bāwal are for the most part orthodox Hindus, that tract lying closer to the great centres of Hinduism. The speech of the great mass of the people is Punjābi, which is returned by three-fourths of them, but Hindustāni is spoken in the Bāwal *nizāmat* and by the educated classes generally.

The Jats or Jāts of all religions exceed 31 per cent. of the population, the Sidhu tribe, to which the ruling family belongs, being especially important. The Rājputs and Ahīrs also form considerable elements, but the latter are almost entirely confined to the Bāwal *nizāmat*. About 58 per cent. of the total population are supported by agriculture. In 1901 only one native Christian was enumerated in the State, which contains no mission.

Agriculture.

The Bāwal *nizāmat* differs as much from the rest of the State in agricultural conditions as it does in climate and other characteristics, and Amloh and Phūl also differ from one another, but less widely. Amloh, owing to its damp climate, is naturally very fertile and well wooded. The soil is a rich loam, generally free from sand, and the spring-level is near the surface. The introduction of canal-irrigation has intensified the natural tendency of this tract to become waterlogged in seasons of heavy rainfall. Phūl is, with the exception of one small tract, in somewhat marked contrast. The soil is sandy and the spring-level far below the surface. Consequently water was scarce until the introduction of canal-irrigation rendered a great extension of cultivation possible. Though sandy, the soil is fertile, and its power of absorbing moisture prevents waterlogging. Naturally less well wooded than Amloh, the Phūl *nizāmat* was formerly covered with scrub, which is now being cleared as cultivation extends; and indeed the whole tract is undergoing an agricultural

revolution as the canals are developed. The Bāwal *nizāmat*, with its dry hot climate, is singularly destitute of streams, tanks, and trees, and depends for its cultivation on a scanty and precarious rainfall.

The main agricultural statistics for 1903-4 are given below, in square miles:—

Nizāmat.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Amloh . . .	291	186	76	70
Phūl . . .	394	360	85	16
Bāwal . . .	281	247	23	21
Total	966	793	184	107

Gram (190 square miles), wheat (97), pulses (94), *bājra* (74), and barley (62) were the principal food-crops in 1903-4. The area under sugar-cane and cotton was 5 and 12 square miles respectively. The State anticipated the Government of the Punjab in imposing restrictions on the alienation of agricultural land to non-agricultural classes.

Cattle are not raised in large numbers, though there is some cattle-breeding in the Jangal. The fairs at Phūl and Jaito are important centres for the sale of cattle raised in the Southern Punjab. The latter is held in March and is attended by about 25,000 people, and the former by 5,000. Fairs are also held at Amloh and Nābha; and at Mahāsar in the Bāwal *nizāmat* a large fair takes place twice a year, at which animals worth Rs. 1,50,000 change hands. Few horses are now raised in the State, though the Jangal used to be famous for a powerful breed. Goats are more prized than sheep, as they supply milk; they are mostly reared in Bāwal. Camels are kept by the people for ploughing and the transport of grain in both Phūl and Bāwal, owing to the character of the country.

The State owns 3·168 per cent. of the Sirhind Canal; and the Abohar and Bhatinda branches irrigate a large part of the Phūl *nizāmat*, while the Kotla branch supplies the rest of that *nizāmat*, and another irrigates a part of Amloh. The area irrigated varies inversely with the rainfall, the highest figures ever reached being 17,052 acres in Phūl and 7,110 acres in Amloh. In Amloh the spring-level is high and well-irrigation is common, 26 per cent. of the cultivated area being irrigated in this way. In Phūl, on the other hand, the spring-level is very low, and only 2 per cent. of the cultivated area is irrigated from wells. In Bāwal, where there are no canals, 7 per cent. of the cultivated area is irrigated from wells. In 1903 the total number of wells in the State was 4,723, of which 3,385 were in Amloh. About 73 per cent. of the wells in Amloh are worked by means of the Persian wheel, which is unknown in the other *nizāmats*.

Stone is quarried in the Kānti and Behālī hills in the Bāwal *nizāmat*. *Kankar* is found in several places throughout the State, and saltpetre in a few scattered villages in the *nizāmats* of Phūl and Amloh.

Trade and communications.

The chief industries are the manufacture of silver and gold ornaments, and brass utensils for local needs. Earthen vessels and clay toys are exported to the neighbouring tracts. Lace or *gota* is manufactured at Nābha town and exported. Amloh has some reputation for its fabrics known as *sahelī* and *sūsī*, and of late the manufacture of iron goods has been carried on with success. *Dārīs*, or cotton carpets, are woven at Amloh and Nābha. The latter town possesses a cotton-ginning factory and a steam cotton-press, and Jaito a steam oil-mill, which employ 115, 40, and 22 persons respectively.

The State exports grain in large quantities. To facilitate this export markets have been established at a number of places, that at Jaito being the largest. Cotton is also exported, chiefly to Ambāla.

Railway communications are good. The State is traversed by the main line and by the Rājpura-Bhatinda, Ludhiāna-Dhūri-Jākhal, and Ferozepore-Bhatinda branches of the North-Western Railway, while the Rājputāna-Mālwā Railway crosses the Bāwal *nizāmat*. The State contains 88 miles of metalled and 35 miles of unmetalled roads. Of the former, the principal connects Nābha town with Patiāla (18 miles), with Kotla (18 miles), and with Khanna (24 miles).

The postal arrangements of the State are governed by the convention of 1885, which established a mutual exchange of all postal articles between the British Post Office and the State post. The ordinary British stamps, surcharged 'Nābha State' and 'Nābha State service,' are supplied to the State at cost price. The Postal department is controlled by a postmaster-general.

Famine.

The inhabitants of the State must have suffered from the famines which affected the adjoining tracts of Patiāla and Jīnd, but the records afford no information except in regard to the scarcity of 1899–1900. Even in regard to that, few statistics are available. The distress, except in parts of Bāwal, was not very severe, and it was largely to meet the needs of famine-stricken refugees from Bīkaner and Hissār that measures of relief were undertaken. The maximum number of persons employed on works was about 3,000, and of persons in receipt of charitable relief about 2,000.

Administration.

There is one Political Agent for the Phūlkiān States and Bahāwalpur, with head-quarters at Patiāla. The Rājā himself controls the administration. He is assisted by a council of three members, the *Ijlās-i-ālia*, which also acts as a court of appeal from the orders of the heads of departments as well as from the courts of justice. The principal departmental officers are the

Mīr Munshi, or foreign minister, who, in addition to the duties indicated by his title, controls the postal, canal, and education departments; the Bakhshi, or commander-in-chief, who is responsible for the administration of the army and police departments; the Hākim-i-adālat-i-sadr, or head of the judicial department, who also possesses important powers as a court of appeal in civil and criminal cases; and the Dīwān-i-māl sadr, whose special charge is revenue and finance, and who controls the *nāzims* in their capacity as revenue officers. Each of the three *nizāmats* is subdivided into *thānas* or police circles which correspond generally to the old *parganas*. The *nizāmats* are also *tahsīls*, each being administered by a *nāzim*, under whom is a *tahsīldār*.

The principal court of original criminal jurisdiction in each *nizāmat* is that of the *nāzim*, who can award sentences of imprisonment up to three years. Subordinate to the *nāzim* are the *naib-nāzims* and the *tahsīldārs*, whose jurisdiction is limited to cases of trespass. Appeals from the orders of the *nāzims* lie to the *Adālat sadr*, which in its original jurisdiction can inflict sentences of imprisonment up to five years, and from the *Adālat sadr* to the *Ijlās-i-ālia* of three judges. The highest court is the *Ijlās-i-Khās*, in which the Rājā presides, and which alone can inflict the severest penalties of the law. No regular appeal lies to this court, but the Rājā exercises full powers of revision over the proceedings of the lower courts. Civil suits of a value not exceeding Rs. 1,000 are disposed of by a Munsif in each *nizāmat*, from whose decisions an appeal lies to the *nāzim*. The *nāzim* himself disposes of all suits of a value exceeding Rs. 1,000. The *Adālat sadr* hears appeals from his orders, and the *Ijlās-i-ālia* from those of the *Adālat sadr*. In revenue cases, appeals from the orders of the *tahsīldārs* lie to the *nāzim*, and further appeals in revenue executive cases to the Dīwān, and in other cases to the *Adālat sadr*. A third appeal is allowed to the *Ijlās-i-ālia* from decisions of the *Adālat sadr*. A city magistrate, with the powers of a *nāzim*, disposes of civil and criminal work in the capital. The Indian Penal Code and Procedure Codes are in force, with certain modifications.

The land revenue alone and the total revenue of the State are shown below, in thousands of rupees:—

	1880-1.	1900-1.	1903-4.
Land revenue . . .	6,50	7,60	8,82
Total revenue . . .	11,69	12,36	14,71

Apart from land revenue, the principal items in 1903-4 were cesses (Rs. 61,000), irrigation (1·3 lakhs), and excise (Rs. 51,000). The expenditure included public works (3·8 lakhs), army (1·9 lakhs), police

(Rs. 86,000), and education (Rs. 10,000). The mint, which dates from a period prior to the establishment of British rule in the Punjab, is still used, but only on very special occasions, such as the accession of a Rājā. The Nābha rupee is worth 15 annas.

It is doubtful whether Akbar's land revenue assessments were ever applied to the country which is now comprised in the main portion of the State. Bāwal, however, was a *pargana* of the *sarkār* of Rewāri. The ancient system of levying the revenue in kind was in force in Nābha State up to 1860, when a cash assessment was introduced in all the *parganas* except that of Lohat Baddi, in which it was not introduced till 1875. The first assessments were summary in character, but in 1873 the present Rājā directed a regular settlement of the Amloh *nizāmat* to be carried out. This work was completed in 1878, the settlement operations being conducted according to the British Revenue Law of 1848 and the rules thereunder, and the assessment was fixed for a period of twenty years. In 1888 the settlement of the Bāwal *nizāmat* was taken in hand and completed in 1892, that of the Phūl *nizāmat* being commenced in 1891 and reaching its conclusion in 1901. These two latter settlements were conducted on the lines of the Punjab Revenue Law of 1887, the land being measured and the record-of-rights prepared as in a British District. The land revenue demand under the new settlements amounted in 1905-6 to 8.8 lakhs. The revenue rates for unirrigated land vary from a minimum of R. 0-8-5 in Phūl to a maximum of Rs. 2-10 for the best land in the same *nizāmat*. For irrigated land, they vary from Rs. 2-2 in Bāwal to Rs. 6-13-6 in Phūl.

Rent is paid either in cash or in kind. The share of the produce varies from one-quarter to one-half, and this system is common in Phūl and Amloh. Cash rents are the rule in Bāwal, ranging from 12 annas to nearly Rs. 7 per acre on unirrigated land, and from Rs. 5 to Rs. 17-8 on irrigated land.

The lease of the State distillery at Nābha is sold by auction, and the contractor arranges for the retail sale through his agents, who are not allowed to charge more than a certain price for each kind of liquor. The poppy is not grown in Nābha, but raw opium is imported from Mālwā and the Hill States, and prepared for the market after importation. The Phūl preparations are well-known and command a large sale. Hemp drugs are imported from Hoshiārpur, but their export is prohibited. The licences for the retail vend of both are auctioned. The State receives an allotment of 35 chests of Mālwā opium per annum, each chest containing 1.25 cwt. The State pays a special duty of Rs. 280 per chest for this opium, instead of the ordinary duty of Rs. 275; but it is credited back to the State by Government, with a view to secure the cordial co-operation of the State officials in the

suppression of smuggling. The import of opium into British territory from the Bāwal *nizāmat* is forbidden.

Nābha is the only town in the State that is administered as a municipality, but octroi is levied in the markets established at Jaito, Phūl, and Bahādur Singhwālā.

The Public Works department is in charge of the Afsar-i-Tamīrāt, subject to the general control of the Dīwān. The principal public buildings are mentioned in the article on NĀBHA TOWN.

The army consists of a battalion of Imperial Service infantry, and a local force of 150 cavalry, 70 infantry, and 40 artillerymen with 10 serviceable guns.

The total strength of the police force is 838 officers and men, and the executive head of the force is styled Colonel of Police. The department is under the control of the Bakhshī. There are, in addition, 533 village watchmen. The principal jail is at Nābha town. It is managed by a *dāroga* under the supervision of the city magistrate, and has accommodation for 500 prisoners. The jail industries include carpet-weaving and paper-making. The jail at Bāwal has accommodation for 100 prisoners.

The State contains thirteen public schools, all managed by a committee of officials. The system dates from 1880, when the school at Nābha was raised to the middle standard. In 1885 its students first appeared in the Punjab University examination; in 1888 it was raised to the status of a high school; and in 1893 to that of a college, to be reduced again five years later to that of a high school owing to lack of funds. Bāwal has a middle school, and at Chotiān an Anglo-vernacular school is maintained, to which none but sons of Sikhs are admitted without the Rājā's permission. The total expenditure on education in 1903–4 was Rs. 10,000. In 1901 the percentage of the population able to read and write was 4·2 (7·4 males and 0·1 females), being higher than in any other State in the Province. The total number of persons under instruction rose from 396 in 1891 to 635 in 1903–4.

There are 8 dispensaries in the State, in addition to the hospital at the capital, which contains accommodation for 5 in-patients. In 1903–4 the number of cases treated was 68,673, of whom 1,914 were in-patients, and 1,791 operations were performed. In the same year, 525 persons were successfully vaccinated, or 1·76 per 1,000 of the population. The vaccination staff consists of a superintendent and three vaccinators, one for each *nizāmat*, first appointed in 1882. Vaccination is nowhere compulsory. The total expenditure on medical relief in 1903–4 was Rs. 9,600.

The first trigonometrical survey was made between 1847 and 1849, and maps were published on the 1-inch and 2-inch scales. A 4-inch

map of the Cis-Sutlej States was published in 1863, and a revised edition in 1897. The 1-inch maps prepared in 1847–9 were revised in 1886–92. There are no revenue survey maps.

[H. A. Rose, *Phūlkiān States Gazetteer* (in the press); L. H. Griffin, *The Rājās of the Punjab* (second edition, 1873).]

Nābha Town.—Capital of the Nābha State, Punjab, situated in 30° 23′ N. and 76° 10′ E., on the Rājpura-Bhatinda branch of the North-Western Railway. Population (1901), 18,468. Founded on the site of two older villages in 1755 by Hamīr Singh, chief and afterwards Rājā of Nābha, it has since been the capital of the State. It is surrounded by a mud wall containing six gates. In the heart of the town is a fort, with a masonry rampart and four towers. One part of the fort is kept private, while the rest is used for state offices. The marble monuments of former Rājās are situated in the Shām Bāgh inside the town. The palaces of the Rājā and the heir apparent are in the Pukhta Garden outside the town, while Elgin House, a spacious building, reserved for the accommodation of distinguished visitors, stands in the Mubārak Garden close by. The cantonment and the jail, which has accommodation for 500 prisoners, lie outside the town. The principal exports are grain, oilseeds, and raw and ginned cotton; the principal imports are sugar and cloth. The town is administered as a municipality; the income in 1903–4 was Rs. 19,000, chiefly derived from octroi, and the expenditure was Rs. 22,200. It contains a high school and a hospital, called the Lansdowne Hospital.

Nādanghāt.—Village in the Kālna subdivision of Burdwān District, Bengal, situated in 23° 22′ N. and 88° 15′ E., on the Kharī river. Population (1901), 916. Nādanghāt is the principal rice mart in the interior of the District, whence large quantities of grain are carried by country boats to the Bhāgīrathi.

Nādaun Estate.—Estate in the Hamīrpur *tahsīl* of Kāngra District, Punjab, with an area of 87 square miles. Its holder is a grandson of Rājā Sansār Chand, and is thus, like the holder of LAMBĀGRAON, a representative of the ancient Katoch dynasty of Kāngra. Jodhbīr Chand, Sansār Chand's illegitimate son, gave his two sisters in marriage to Ranjīt Singh, and was created a Rājā, Nādaun, the northern portion of the Katoch dominions, being conferred upon him. Rājā Jodhbīr Chand remained loyal during the Katoch insurrection of 1848, and as a reward his *jāgīr* (then worth Rs. 26,270 a year) was confirmed to him by the British Government on annexation. His son Pirthi Singh earned the Order of Merit for his services during the Mutiny. In 1868 the Rājā was made a K.C.S.I. and received a salute of 7 guns. The estate in 1890 devolved by primogeniture on Narindar Chand, the present Rājā. His *jāgīr* consists of 14 villages and

brings in about Rs. 35,000 a year. He is an honorary magistrate and Munsif.

Nādaun Town.—Petty town in the Hamīrpur *tahsīl* of Kāngra District, Punjab, situated in 31° 46′ N. and 79° 19′ E., on the left bank of the Beās, 20 miles south-east of Kāngra town, and head-quarters of the *jāgīr* of the Rājā of Nādaun, son of the late Rājā Sir Jodhbīr Chand. Population (1901), 1,426. It was once a favourite residence of Rājā Sansār Chand, who built himself a palace at Amtar, on the river bank, one mile from the town, where he held his court during the summer.

Nadiā District. — District in the Presidency Division, Bengal, lying between 22° 53′ and 24° 11′ N. and 88° 9′ and 89° 22′ E., with an area of 2,793 square miles. It is bounded on the west by the Bhāgīrathi, or Hooghly river; on the south by the Twenty-four Parganas; on the north the Jalangī river separates it from Murshidābād, and the Padmā or main channel of the Ganges from Rājshāhi and Pābna; Farīdpur and Jessore Districts form the eastern boundary.

Physical aspects.

Nadiā is situated at the head of the Gangetic delta, and its alluvial surface, though still liable in parts to inundation, has been raised by ancient deposits of silt above the normal flood-level; its soil is agriculturally classed as high land, and bears cold-season crops as well as rice. The rivers have now ceased their work of land-making and are beginning to silt up. The general aspect is that of a vast level alluvial plain, dotted with villages and clusters of trees, and intersected by numerous rivers, backwaters, minor streams, and swamps. In the west of the District is the Kālāntar, a low-lying tract of black clay soil which stretches from the adjoining part of Murshidābād through the Kālīganj and Tehāta *thānas*.

Along the northern boundary flows the wide stream of the PADMĀ. This is now the main channel of the Ganges, which has taken this course in comparatively recent times; it originally flowed down the Bhāgīrathi, still the sacred river in the estimation of Hindus, and it afterwards probably followed in turn the course of the Jalangī and the Mātābhānga before it eventually took its present direction, flowing almost due east to meet the Brahmaputra near Goalundo. The rivers which intersect the District are thus either old beds of the Ganges or earlier streams, like the Bhairab, which carried the drainage of the Darjeeling Himālayas direct to the sea before the Padmā broke eastwards and cut them in halves. The whole District is a network of moribund rivers and streams; but the BHĀGĪRATHI, the JALANGĪ, and the MĀTĀBHĀNGA are the three which are called distinctively the 'NADIĀ RIVERS.' The Jalangī flows past the head-quarters station of Krishnagar, and falls into the Bhāgīrathi opposite the old town

of Nadiā. Its chief distributary is the Bhairab. The Mātābhānga, after throwing off the Pāngāsi, Kumār, and Kabadak, bifurcates near Krishnaganj into the Churnī and Ichāmatī, and thereafter loses its own name. Marshes abound.

The surface consists of sandy clay and sand along the course of the rivers, and fine silt consolidating into clay in the flatter parts of the plain.

The swamps afford a foothold for numerous marsh species, while the ponds and ditches are filled with submerged and floating water-plants. The edges of sluggish creeks are lined with large sedges and bulrushes, and the banks of rivers have a hedge-like shrub jungle. Deserted or uncultivated homestead lands are densely covered with shrubberies of semi-spontaneous species, interspersed with clumps of planted bamboos and groves of *Areca*, *Moringa*, *Mangifera*, and *Anona*; and the slopes of embankments are often well wooded.

Wild hog are plentiful, and snipe abound in the swamps. There are still a few leopards, and wild duck are found in the *jhīls* near the Padmā. Snakes are common and account for some 400 deaths annually; about 90 more are caused by wild animals.

The mean temperature for the year is 79°, ranging between 69° and 88°. The mean minimum varies from 52° in January to 79° in June, and the mean maximum from 77° in December to 97° in May. The average humidity is 79 per cent. of saturation, varying from 71 per cent. in March to 87 per cent. in August. The annual rainfall averages 57 inches, of which 6·5 inches fall in May, 9·7 in June, 10·5 in July, 11·3 in August, 8·1 in September, and 4·1 in October.

Floods occur frequently and cause much damage; the area especially liable to injury is a low-lying strip of land, about 10 miles wide, running in a south-easterly direction across the centre of the District. It is said that this is swept by the floods of the Bhāgīrathi whenever the great Lalitākuri embankment in Murshidābād District gives way, but it is on record that the breaking of this embankment has not always been followed by a rise of the flood-level in Nadiā.

History.

The town of Nadiā or NABADWĪP (meaning 'new island'), from which the District takes its name, has a very ancient history, and about the time of William the Conqueror the capital of the Sen kings of Bengal was transferred thither from Gaur. In 1203 Lakshman Sen, the last of the dynasty, was overthrown by the Muhammadan freebooter Muhammad-i-Bakhtyār Khiljī, who took the capital by surprise and subsequently conquered the greater part of Bengal proper. No reliable information is on record about the District until 1582, when the greater part of it was included at Todar Mal's settlement in *sarkār* Sātgaon, so called from the old

trade emporium of that name near the modern town of Hooghly. At that time it was thinly inhabited, but its *pandits* were conspicuous for their learning. The present Mahārājā of Nadiā is a Brāhman, and has no connexion with Lakshman Sen's dynasty; his family, however, claims to be of great antiquity, tracing its descent in a direct line from Bhattanārāyan, the chief of the five Brāhmans who were imported from Kanauj, in the ninth century, by Ādisūr, king of Bengal. At the end of the sixteenth century a Rājā of this family assisted the Mughal general, Mān Singh, in his expedition against Pratāpāditya, the rebellious Rājā of Jessore, and subsequently obtained a grant of fourteen *parganas* from Jahāngīr as a reward for his services. The family appears to have reached the zenith of its power and influence in the middle of the eighteenth century, when Mahārājā Krishna Chandra took the side of the English in the Plassey campaign, and received from Clive the title of Rājendra Bahādur and a present of 12 guns used at Plassey, some of which are still to be seen in the Mahārājā's palace.

Nadiā District was the principal scene of the indigo riots of 1860, which occasioned so much excitement throughout Bengal proper. The native landowners had always been jealous of the influence of the European planters, but the real cause of the outbreak was the fact that the cultivators realized that at the prices then ruling it would pay them better to grow oilseeds and cereals than indigo. Their discontent was fanned by interested agitators, and at last they refused to grow indigo. The endeavours made by the planters to compel them to do so led to serious rioting, which was not suppressed until the troops were called out. A commission was appointed to inquire into the relations between the planters and the cultivators, and matters gradually settled down; but a fatal blow had been dealt to indigo cultivation in the District, from which it never altogether recovered. Several factories survived the agitation, and some still continue to work; but the competition of synthetic indigo has reduced the price of the natural dye to such an extent that the proprietors are finding it more profitable to give up indigo and to manage their estates as ordinary *zamīndāris*.

Population.

The population of the present area increased from 1,500,397 in 1872 to 1,662,795 in 1881. Since that date it has been almost stationary, having fallen to 1,644,108 in 1891, and risen again to 1,667,491 in 1901. From 1857 to 1864 the District was scourged by the 'Nadiā fever,' which caused a fearful mortality, especially in the old jungle-surrounded and tank-infested villages of the Rānāghāt subdivision. There are no statistics to show the actual loss of life, but it is known that in some parts whole villages were depopulated. There was a recrudescence of the disease in

1881–6, which caused the loss of population recorded at the Census of 1891. Nadiā is still one of the most unhealthy parts of Bengal, and in 1902 the deaths ascribed to fevers amounted to no less than 41 per 1,000 of the population. In 1881 a special commission ascribed the repeated outbreaks of malaria to the silting up of the rivers, which had become 'chains of stagnant pools and hotbeds of pestilence in the dry season.' Fevers accounted for no less than 82 per cent. of the deaths in 1901, as compared with the Provincial average of 70 per cent. Cholera comes next, and is responsible for 4 per cent. of the mortality.

The principal statistics of the Census of 1901 are shown below:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Krishnagar .	701	2	740	361,333	515	+ 3·5	29,784
Rānāghāt .	427	4	568	217,077	508	− 5·6	16,706
Kushtia . .	596	2	1,011	486,368	816	+ 0·7	22,743
Meherpur .	632	1	607	348,124	551	+ 3·4	13,875
Chuādānga .	437	...	485	254,589	583	+ 3·7	10,267
District total	2,793	9	3,411	1,667,491	597	+ 1·4	93,375

The principal towns are KRISHNAGAR, the head-quarters, SĀNTIPUR, NABADWĪP or Nadiā, KUSHTIA, RĀNĀGHĀT, and MEHERPUR. The Kushtia subdivision is by far the most populous portion of the District. The low density elsewhere is due to the silting up of the rivers, which has obstructed the drainage and caused long-continued unhealthiness. The soil also has lost much of its fertility, now that it is no longer enriched by annual deposits of silt. The material condition of the District is less satisfactory than that of its neighbours, and since 1891 it has lost 65,000 persons by migration, chiefly to the adjoining Districts and to Calcutta. Owing to this cause, it contains 1,015 females to every 1,000 males. The prevalent language is Bengali, which is spoken with remarkable purity by the educated classes. Muhammadans number 982,987, or 59 per cent. of the population, and Hindus 676,391, or 40·6 per cent.; the preponderance of the former is most marked in the eastern part of the District, and especially in the Kushtia subdivision. It is a curious circumstance that whereas Muhammadans form the majority of the whole population, they are in a very considerable minority in the towns, where they only form 26·3 per cent. of the total. Of the Muhammadans, large numbers belong to the puritanic sect of Farāzis or Wahābis; and the fanatic leader, Titu Miān, an account of whose rebellion in 1831 will

be found in the article on the TWENTY-FOUR PARGANAS, recruited many of his followers in Nadiā.

The Kaibarttas (111,000), the great race caste of Midnapore, are by far the most numerous caste in the District, and they are followed by the Goālās (cowherds), who number 71,000. The Brāhmans (47,000) are to a great extent the descendants of settlers in the time of the Sen kings. Next in numerical importance come the low-caste Bāgdis, Muchis, and Chandāls. Kāyasths number 31,000 and there are 26,000 Mālos or boatmen. Of every 100 persons in the District, 56 are engaged in agriculture, 16 in industry, one in commerce, 2 in one or other of the professions, and 17 in general labour. This District was the birthplace, in 1485, of the great religious reformer Chaitanya, who founded the modern Vaishnava sect of Bengal. He was opposed to caste distinctions, and inveighed against animal sacrifices and the use of animal food and stimulants, and taught that the true road to salvation lay in *bhakti* or devotion to God. A favourite form of worship with this sect is the *sankīrtan*, or hymn-singing procession, which has gained greatly in popularity of late years. The town of Sāntipur, in the Rānāghāt subdivision, is held sacred as the residence of the descendants of Adwaita, one of the two first disciples of Chaitanya. Most of his followers, while accepting his religious views, maintain their original caste distinctions, but a small minority abandoned them and agreed to admit to their community recruits from all castes and religions. These persons are known as Baishnabs or Bairāgis. At the present day most of their new adherents join them because they have been turned out of their own castes, or on account of love intrigues or other sordid motives; and they hold a very low position in popular estimation. A large proportion of the men live by begging, and many of the women by prostitution.

Among the latter-day offshoots of Chaitanya's teaching, one of the most interesting is the sect of Kartābhajās, the worshippers of the Kartā or 'headman.' The founder of the sect was a Sadgop by caste, named Rām Saram Pāl, generally known as Kartā Bābā, who was born about two centuries ago near Chākdaha in this District, and died at Ghoshpāra. This sect accepts recruits from all castes and religions, and its votaries assemble periodically at Ghoshpāra to pay homage to their spiritual head.

Christians number 8,091, of whom 7,912 are natives. The Church of England possesses 5,836 adherents, and the Roman Catholic Church 2,172. The Church Missionary Society commenced work in 1831, and has 13 centres presided over by native clergy or catechists, and superintended by 6 or 7 Europeans. The Roman Catholic Mission was established in 1855, and Krishnagar is now the head-

quarters of the diocese of Central Bengal. In 1877 there was a schism among the adherents of the Church Missionary Society, and a number of them went over to the Church of Rome. The Church of England Zanāna Mission works at Krishnagar and at Ratanpur, and a Medical mission at Rānāghāt.

Agriculture.

We have already seen that Nadiā is not a fertile District. In most parts the soil is sandy, and will not retain the water necessary for the cultivation of winter rice, which is grown only in the Kālāntar and parts of the Kushtia subdivision, occupying but one-ninth of the gross cropped area. The land has often to be left fallow to enable it to recover some degree of fertility. A very large number of the cultivators are mere tenants-at-will and have little inducement to improve their lands, and the repeated outbreaks of malaria have deprived them of vitality and energy. The dead level of the surface affords little opportunity for irrigation, which is rarely attempted. The total area under cultivation in 1903-4 was 901 square miles, the land classed as cultivable waste amounting to 544 square miles. Separate statistics for the subdivisions are not available.

The staple crop is rice, grown on 775 square miles, or 86 per cent. of the net cropped area. The autumn crop is the most important; it occupies about 607 square miles and is usually reaped in August and September, but there is a late variety which is harvested about two months later. The winter crop is reaped in December, and the spring rice in March or April. The winter and spring crops are transplanted, but the autumn rice is generally sown broadcast. After rice, the most important crops are gram and other pulses, linseed, rape and mustard, jute, wheat, indigo, and sugar-cane. The cultivation of indigo is contracting, and only 6,300 acres were sown in 1903-4. After the autumn rice is harvested, cold-season crops of pulses, oilseeds, and wheat are grown on the same fields, and 79 per cent. of the cultivated area grows two crops. The rice grown in the District is insufficient to satisfy the local demand. In some parts, especially in the subdivision of Chuādānga, the cultivation of chillies (*Capsicum frutescens*) and turmeric forms an important feature in the rural industry, upon which the peasant relies to pay his rent.

Cultivation is extending, but no improvement has taken place in agricultural methods. The manuring practised is insufficient to restore to the soil what the crops take from it, and it is steadily deteriorating. Very little advantage has been taken of the Land Improvement and Agriculturists' Loans Acts.

The local cattle are very inferior; the pasturage is bad, and no care is taken to improve the breeds by selection or otherwise.

Sāntipur was once famous for its weavers, and in the beginning

Trade and communications.

of the nineteenth century the agent of the East India Company used to purchase muslins to the annual value of £150,000. The industry, however, has almost died out. Very little muslin is now exported, and even the weaving of ordinary cotton cloth is on the decline. Sugar-refining by European methods has proved unsuccessful, but there are several date-sugar refineries in native hands at Sāntipur, Munshiganj, and Alamdānga. Brass-ware is manufactured, particularly at Nabadwīp and Meherpur, and clay figures are moulded at Krishnagar; the latter find a ready sale outside the District and have met with recognition at exhibitions abroad. There is a factory at Kushtia under European management for the manufacture of sugar-cane mills.

Owing to its numerous waterways, the District is very favourably situated for trade. Moreover, the Eastern Bengal State Railway runs through it for a distance of nearly 100 miles. Gram, pulses, jute, linseed, and chillies are exported to Calcutta, and sugar to Eastern Bengal. Coal is imported from Burdwān and Mānbhūm; salt, oil, and piece-goods from Calcutta; and rice and paddy from Burdwān, Dinājpur, Bogra, and Jessore.

The chief railway trade centres are Chuādānga, Bagulā, Rānāghāt, Dāmukdia, and Porādaha; and those for river traffic are Nabadwīp on the Bhāgīrathi, Sāntipur and Chākdaha on the Hooghly, Karīmpur, Andulia, Krishnagar, and Swarūpganj on the Jalangī, Hānskhāli on the Churnī, Boāliā and Krishnaganj on the Mātābhānga, Nonāganj on the Ichāmatī, Alamdānga on the Pāngāsi, and Kushtia, Kumārkhāli, and Khoksā on the Garai. About thirty-eight fairs are held yearly. Most of them, however, are religious gatherings; the best attended are the fairs held at Nabadwīp in February and November, at Sāntipur in November, at Kuliā in January, and at Ghoshpāra in March.

The Eastern Bengal State Railway (broad gauge) passes through the District from Kānchrāpāra on the southern, to Dāmukdia on the northern boundary; and a branch runs east from Porādaha, through Kushtia, to Goalundo in Farīdpur District. The central section of the same railway runs from Rānāghāt eastwards to Jessore, and a light railway (2 feet 6 inches gauge) from Rānāghāt to Krishnagar via Sāntipur. A new line has recently been constructed from Rānāghāt to Murshidābād.

The District board maintains 803 miles of roads, in addition to 526 miles of village tracks. Of the roads, 107 miles are metalled, including the roads from Krishnagar to Bagulā and Rānāghāt, from Meherpur to Chuādānga, and several others which serve as feeders to the railway. Of the unmetalled roads the most important is the road from Bārāsat in the Twenty-four Parganas, through Rānāghāt and Krishnagar, to Plassey in the north-west corner of the District.

All the rivers are navigable during the rainy season by boats of large burden, but in the dry season they dwindle to shallow streams and are obstructed by sandbanks and bars. Before the era of railways the NADIĀ RIVERS afforded the regular means of communication between the upper valley of the Ganges and the sea-board, and elaborate measures are still adopted to keep their channels open. Steamers ply daily between Calcutta and Kālna via Sāntipur, and on alternate days, during the rains, between Kālna and Murshidābād via Nabadwīp. Numerous steamers pass up and down the Padmā, and a steam ferry crosses that river from Kushtia to Pābna.

Famine.

Nadiā suffered severely in the great famine of 1770. The worst famines of recent times were those of 1866 and 1896. On the former occasion relief from Government and private funds was necessary from April to October; 601,000 persons were gratuitously relieved, and 337,000 were employed on relief works. The famine of 1896 affected about two-fifths of the District including the Kālāntar, the Meherpur subdivision, and the western portions of the Kushtia and Chuādānga subdivisions. The grant of relief continued from November, 1896, until September, 1897, the total expenditure from public funds being 6¼ lakhs. The daily average number of persons employed on relief works was 8,913. In July, 1897, the average rose to 25,500 persons, and gratuitous relief was afforded daily to an average of 33,000 persons.

Administration.

For administrative purposes Nadiā is divided into five subdivisions, with head-quarters at KRISHNAGAR, KUSHTIA, RĀNĀGHĀT, MEHERPUR, and CHUĀDĀNGA. The District Magistrate is assisted at head-quarters by a staff of five Deputy-Magistrate-Collectors, one of whom is solely employed on land acquisition work. The Meherpur subdivision is in charge of an Assistant Magistrate-Collector, while the other subdivisional officers are Deputy-Magistrate-Collectors.

For the disposal of civil work, the judicial staff subordinate to the District and Sessions Judge consists of a Sub-Judge and two Munsifs at Krishnagar, two Munsifs at Kushtia, and one each at Meherpur, Chuādānga, and Rānāghāt. The criminal courts are those of the District and Sessions Judge, the District Magistrate, four Deputy-Magistrates at Krishnagar, and the subdivisional officers in the other subdivisions. No class of crime is now specially prevalent, but at the beginning of the nineteenth century the District was notorious for dacoity and rioting.

The current land revenue demand for 1903–4 was 9·1 lakhs, due from 2,492 estates. Of these, 2,216 with a revenue of 8·14 lakhs are permanently settled, 246 estates paying Rs. 73,000 are temporarily settled, and 30 estates paying Rs. 22,000 are managed direct by the Collector.

In addition, there are 299 revenue-free estates and 9,169 rent-free lands, which pay road and public works cesses. The gross rental of the District has been returned by the proprietors and tenure-holders at 34 lakhs, and of this sum the Government revenue demand represents 26·7 per cent. The incidence of the land revenue is R. 0-15-3 per acre on the cultivated area.

The *utbandi* tenure is not peculiar to Nadiā, but is especially common in this District, where about 65 per cent. of the cultivated land is held under it. The tenant pays rent only for the land he cultivates each year; and he cannot acquire occupancy rights unless he tills the same land for twelve years consecutively, which in fact he rarely does. Meanwhile the landlord can raise the rent at his pleasure, and if the tenant refuses to pay, he can be ejected. This tenure deprives the tenant of any incentive to improve his lands, and at the same time encourages rack-renting. It appears, however, to be gradually giving way to the ordinary system. Where the tenants have occupancy rights, the rent of rice land ranges from Rs. 1-4 to Rs. 4-8 an acre; garden land is rented at about Rs. 11 an acre, and land under special crops, such as chillies and sugar-cane, at Rs. 7-8 or even more. Lands leased under the *utbandi* system pay higher rents, as much as Rs. 12 to Rs. 23 being paid per acre, as compared with R. 1 to Rs. 2-9 for similar lands held on long leases.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees:—

	1880-1.*	1890-1.	1900-1.	1903-4.
Land revenue . .	10,98	9,30	9,10	9,04
Total revenue . .	16,68	14,93	16,58	17,10

* In 1880-1 the District included the subdivision of Bangaon, which was subsequently transferred to Jessore.

Outside the nine towns which enjoy municipal government, local affairs are managed by a District board with five subdivisional local boards. The income of the District board in 1903-4 was Rs. 1,89,000, of which Rs. 90,000 was derived from rates; and the expenditure was Rs. 1,42,000, including Rs. 74,000 spent on public works and Rs. 42,000 on education.

The District contains 21 police stations and 13 outposts. In 1903 the force at the disposal of the District Superintendent consisted of 5 inspectors, 48 sub-inspectors, 47 head constables, and 627 constables, maintained at a cost of Rs. 1,38,000. There is one policeman to every 5·4 square miles and to 3,231 persons, a much larger proportion than the Provincial average. Besides, there are 3,990 village *chaukīdārs* under 347 *daffadārs*.

The District jail at Krishnagar has accommodation for 216 prisoners,

and subsidiary jails at each of the other subdivisional head-quarters for a total of 61.

Nadiā District, in spite of its proximity to Calcutta, is not especially remarkable for the diffusion of the rudiments of learning. In 1901 the proportion of literate persons was 5·6 per cent. (10·4 males and 0·9 females). The total number of pupils under instruction increased from about 20,000 in 1883 to 29,364 in 1892–3 and 31,102 in 1900–1, while 31,573 boys and 3,442 girls were at school in 1903–4, being respectively 25·4 and 2·7 per cent. of the number of school-going age. The number of educational institutions, public and private, in 1903–4 was 1,026, including an Arts college, 90 secondary, 887 primary, and 48 special schools. The expenditure on education was 3·26 lakhs, of which Rs. 62,000 was met from Provincial funds, Rs. 40,000 from District funds, Rs. 3,000 from municipal funds, and 1·37 lakhs from fees. Nadiā has always been famous as a home of Sanskrit learning, and its *tols*, or indigenous Sanskrit schools, deserve special mention. In these *Smriti* (Hindu social and religious law) and *Nyāya* (logic) are taught, many of the pupils being attracted from considerable distances by the fame of these ancient institutions. A valuable report on these *tols*, by the late Professor E. B. Cowell (Calcutta, 1867), contains a full account of the schools, the manner of life of the pupils, and the works studied. Most of the *tols* are in the town of Nabadwīp, but there are a few also in the surrounding villages.

In 1903 the District contained 13 dispensaries, of which 7 had accommodation for 52 in-patients. The cases of 66,000 out-patients and 646 in-patients were treated during the year, and 2,700 operations were performed. The expenditure was Rs. 21,000, of which Rs. 5,000 was met by Government contributions, Rs. 3,000 from Local and Rs. 10,000 from municipal funds, and Rs. 1,935 from subscriptions. In addition, the Zanāna Mission maintains a hospital and three dispensaries, and large numbers of patients are treated by the doctors of the Rānāghāt Medical Mission.

Vaccination is compulsory only within municipal areas. In 1903–4 the number of persons successfully vaccinated was 50,000, or 33 per 1,000 of the whole population.

[Sir W. W. Hunter's *Statistical Account of Bengal*, vol. ii (1875); Fever Commission's *Report* (Calcutta, 1881).]

Nadiā Town.—Town in Nadiā District, Bengal. *See* NABADWĪP.

Nadiā Rivers.—A group of offshoots of the Ganges which flow through the Nadiā and Murshidābād Districts of Bengal and unite to form the Hooghly. The Nadiā rivers include the BHĀGĪRATHI, the JALANGĪ with the BHAIRAB, and the MĀTĀBHĀNGA with the Churnī. These rivers represent old spill channels of the Ganges, and during the rains still carry down to the sea a portion of the flood-water from that

the north-western corner of the Nīlgiri plateau, and commanding magnificent views across the Gādalūr *tāluk* below it and the Malabar Wynaad beyond. Population (1901), 2,500. Naduvattam stands on the main road leading from Ootacamund to Gūdalūr, and thence to the coast of Malabar. It is the centre of important cinchona and tea estates, and contains the Government cinchona plantations and factory, at which is manufactured the quinine sold to the public at all post offices in 7-grain packets costing three pies each. It has a healthy climate, and consequently forms the temporary head-quarters of the Gūdalūr *tāluk* office during the time when fever is worst in Gūdalūr. The village has a well-furnished travellers' bungalow, a resthouse for natives, and a police station.

Naenwa.—Town in the north of the State of Būndi, Rājputāna, situated in 25° 46′ N. and 75° 51′ E., about 27 miles north-east of Būndi town. Population (1901), 4,501. The town is surrounded by a wall and ditch, both in fair preservation, and is flanked on the north-east and south-west by three tanks, from which the fosse can be flooded at pleasure. The largest of these tanks, the Nawal Sāgar, is said to have been built by a Solanki Rājput, Nawal Singh, in 1460. The town contains a handsome little palace and a vernacular school attended by 40 boys.

Nāgā Hills.—A District in Eastern Bengal and Assam, lying between 24° 42′ and 26° 48′ N. and 93° 7′ and 94° 50 ′E., with an area of 3,070 square miles. It is bounded on the north by Nowgong and Sibsāgar; on the west by the North Cāchār hills; on the south by the State of Manipur; and on the east by a line which follows for the most part the course of the Dikho and Tizu rivers, beyond which lie hills inhabited by independent tribes. The District consists of a long narrow strip of hilly country. The Barail range enters it from the west, and the Jāpvo peak a little to the south of Kohīmā attains a height of nearly 10,000 feet. Here it is met by the meridional axis of elevation prolonged from the Arakan Yoma, and from this point the main range runs in a north-north-easterly direction. The general effect is that of a gigantic L in the reverse position, the junction of the two arms forming an obtuse instead of a right angle, with minor ridges branching off on either side towards the east and west. The hills generally take the form of serrated ridges, clothed for the most part with dense forest and scrub and grass jungle, and separated from one another by deep valleys, through which a stream or river makes its way to the plains. The largest river in the District is the Doiāng, but it is only navigable for a few miles within the hills. The channel is blocked by rocks at Nabha, or boats could proceed as far as the Mokokchūng-Wokhā road. The DIKHO is also navigable for a short distance within the hills,

Physical aspects.

though the head-hunting proclivities of the tribes inhabiting the right bank might render the voyage dangerous; but the same cannot be said of the JHĀNZI and Disai, which flow through the plains of Sibsāgar into the Brahmaputra. East of the watershed is the Tizu with its tributary the Lanier, which falls into the Chindwin.

The hills have never been properly explored, but they are believed to be composed of Pre-Tertiary rocks, overlaid by strata of the Tertiary age.

The flora of the Nāgā Hills resembles that of Sikkim up to the same altitude. In their natural state, the hills are covered with dense evergreen forest; and where this forest has been cleared for cultivation, high grass reeds and scrub jungle spring up in great profusion.

The usual wild animals common to Assam are found, the list including elephants, bison (*Bos gaurus*), tigers, leopards, bears, serow, *sāmbar*, and barking-deer, and the flying lemur (*Nycticelus tardigradus*). A horned pheasant (*Tragopan blythi*) has also been shot in the hills.

The climate generally is cool, and at Kohīmā the thermometer seldom rises above 80°. The higher hills are healthy, but during the rains the valleys and the lower ranges are decidedly malarious. The rainfall, as in the rest of Assam, is fairly heavy. At Kohīmā it is 76 inches in the year, but farther north, at Wokhā and Tamlū, it exceeds 100 inches. The earthquake of June 12, 1897, was distinctly felt, but not much damage was done, and there is no record of any serious convulsion of nature having ever occurred in the District.

History.

Of the early history of the Nāgās, as of other savage tribes, very little is known. It is interesting, however, to note that Tavernier in the latter half of the seventeenth century refers to people in Assam, evidently Nāgās, who wore pigs' tusks on their caps, and very few clothes, and had great holes for ear-rings through the lobes of their ears, fashions that survive to the present day. In the time of the Ahom Rājās they occasionally raided the plains, but the more powerful princes succeeded in keeping them in check, and even compelled them to serve in their military expeditions. The first Europeans to enter the hills were Captains Jenkins and Pemberton, who marched across them in 1832. The story of the early British relations with these tribes is one of perpetual conflict. Between 1839 and 1851 ten military expeditions were led into the hills, the majority of which were dispatched to punish raids. After the last of these, in which the village of Kekrimā, which had challenged the British troops to a hand-to-hand fight, lost 100 men, the Government of India decided upon a complete withdrawal, and an abstention from all interference with the hillmen. The troops were recalled in March, 1851; and before the end of that year 22 Nāgā raids had taken place, in

which 55 persons were killed, 10 wounded, and 113 taken captive. The policy of non-interference was still adhered to, but the results were far from satisfactory; and between 1853 and 1865, 19 raids were committed, in which 233 British subjects were killed, wounded, or captured. The Government accordingly agreed to the formation of a new District in 1866, with head-quarters at Sāmaguting. Captain Butler, who was appointed to this charge in 1869, did much to consolidate British power in the hills, and exploration and survey work were diligently pushed forward. These advances were, however, resented by the tribesmen; and in February, 1875, Lieutenant Holcombe, who was in charge of one of the survey parties, was killed, with 80 of his followers. Butler himself was three times attacked, and was mortally wounded the following Christmas Day by the Lhotā Nāgās of Pangti. Two years later his successor, Mr. Carnegy was accidentally shot by a sentry, when occupying the village of Mozema, which had refused to give up the persons guilty of a raid into North Cāchār. In 1878 it was decided to transfer the head-quarters of the District to Kohīmā, in the heart of the Angāmī country. During the rains of 1879 indications of trouble began to present themselves; and before starting on his cold-season tour the Political Officer, Mr. Damant, determined to visit the powerful villages of Jotsomā, Khonoma, and Mozema. On reaching Khonoma, he found the gate of the village closed, and as he stood before it, he was shot dead. The Nāgās then poured a volley into his escort, who turned and fled with a loss of 35 killed and 19 wounded. The whole country-side then rose and proceeded to besiege the stockade at Kohīmā, and the garrison were reduced to great straits before they were relieved by a force from Manipur. A campaign against the Nāgās ensued, which lasted till March, 1880. The most notable event in this campaign was a daring raid made by a party of Khonoma men, at the very time when their village was in the occupation of British troops, upon the Bālādhan garden in Cāchār, where they killed the manager and sixteen coolies and burnt down everything in the place. Within the short space of five years four European officers while engaged in civil duties had come to a violent end; but the Nāgās had begun to learn their lesson, and under the able administration of Mr. McCabe the District was reduced to a condition of peace and order. In 1875 a subdivision was opened at Wokhā to exercise control over the Lhotā Nāgās, who on several occasions had attacked survey parties sent into the hills. Fourteen years later it was found possible to withdraw the European officer stationed there, and a subdivision was opened at Mokokchūng in the Ao country. In 1898 the Mīkīr and Rengmā Hills, with the valley of the Dhansiri, which formed the most northerly part of the District as originally constituted, were transferred to Nowgong and Sibsāgar, as, on the completion of

the Assam-Bengal Railway, it was found more convenient to administer this tract of country from the plains than from Kohīmā. Lastly, in 1904, the tract formerly known as the 'area of political control' was formally incorporated in the District, and the boundary was pushed forward to the Tizu river, and even across it on the south so as to include four small Angāmī villages on the farther bank.

Population.

A census of the hills was first taken in 1891, when the population was 96,637; in 1901 the number had risen to 102,402. The tract recently incorporated within the District contains about 30,000 persons. There are two subdivisions, KOHĪMĀ and MOKOKCHŪNG, with head-quarters at places of the same names; and in 1901 the District contained one town, KOHĪMĀ (population, 3,093), and 292 villages. The following table gives for each subdivision particulars of area, population, &c. The large increase which occurred in Mokokchūng between 1891 and 1901 is due to immigration and to the addition of new territory.

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Kohīmā . .	2,337	1	224	68,619	29	− 2·3	1,380
Mokokchūng .	733	...	68	33,783	46	+ 27·9	
District total	3,070	1	292	102,402	33	+ 5·9	1,380

Nearly 96 per cent. of the population in 1901 were still faithful to their various forms of tribal religion. The American Baptist Mission has branches at Kohīmā and at Impur in the Mokokchūng subdivision, and practically the whole of the native Christians (579) were members of this sect. The Nāgās do not at present seem to be attracted to either Hinduism or Christianity. Both of these religions would, in fact, impose restraints upon their ordinary life, and would debar them from many pleasures, such as the consumption of beef and liquor, and a certain latitude in their sexual relations to which they have grown accustomed.

The various languages of the Nāgā group, though classified under one generic head, differ very widely from one another, and in some cases the language spoken in one village would not be understood by people living only a short distance away. Angāmī, Chunglī, and Lhotā are in most general use. The principal tribes are the Angāmīs (27,500), the Aos (26,800), the Lhotās (19,300), and the Semās, who form the greater part of the population in the newly added territory.

The term Nāgā is applied by the Assamese to a number of different tribes, the majority having as yet made little progress on the path of

civilization, who occupy the hills between the Brahmaputra valley and Burma on the north and south, the Jaintiā Hills on the west, and the country inhabited by the Khamtis and Singphos on the east. The Nāgās, like the rest of the tribes of Assam, belong to the great Tibeto-Burman family, but they are differentiated from most of the other sections of the horde by their warlike and independent spirit and by their indifference to the sanctity of human life. Among the Nāgās, society is seen resolved into almost its ultimate unit; and, though they are divided into several different tribes, it must not be supposed that the tribe is the basis upon which their society has been organized. The most warlike and important tribe are the Angāmīs, who occupy the country round Kohīmā. North of them come the Rengmās, then the Lhotās, while north and east of the Lhotās are the Aos, whose villages stretch up to the Dikho river. On the farther side of this river are a number of tribes with which we are at present but imperfectly acquainted, but the Semās live east of the Rengmās and the Aos.

The Nāgās, as a whole, are short and sturdy, with features of a markedly Mongolian type. The Lhotās are exceptionally ugly, and among all the tribes the average of female beauty is extremely low. The people, as a rule, are cheerful and friendly in times of peace, and are musically inclined. As they march along the roads they keep time to a chant, which is varied to suit the gradient and the length of step; and they sing as they reap their rice, their sickles all coming forward in time to the music. East of the Dikho there are chiefs who enjoy certain privileges and exercise authority over their villages, and chiefs are also found among the Semā tribe. These chiefs hold their position by right of inheritance, and, as among the Lushais, the sons, as they grow up, move away and found separate villages. The ordinary Nāgā village is, however, a very democratic community, and the leaders of the people exercise comparatively little influence. They are noted for their skill in war or in diplomacy, or for their wealth; but their orders are obeyed only so far as they are in accord with the inclinations of the community at large, and even then the wishes of the majority are not considered binding on the weaker party. Among the Angāmīs, in fact, the social unit is not the village, but the *khel* (a term borrowed from the Afghān border), an exogamous subdivision of which there are several in each village. There is great rivalry between the *khels*, which, prior to British occupation, led to bitter blood-feuds. The following extract from the report of the Political Officer in 1876 shows the utter want of unity in an Angāmī Nāgā village:—

'In the middle of July a party of forty men from Mozema went over to Kohīmā and were admitted by one of the *khels* friendly to them, living next to the Puchatsuma quarter, into which they passed and killed all they could find, viz. one man and twenty-five women and

children. The people of the other *khels* made no effort to interfere, but stood looking on. One of the onlookers told me that he had never seen such fine sport as the killing of the children, for it was just like killing fowls.'

This extraordinary separation of *khel* from *khel* is the more remarkable, in that they must all be intimately connected by marriage, as a man is compelled to take his wife from some *khel* other than his own.

The villages are, as a rule, built on the tops of hills, and, except among the Semās, are of considerable size, Kohīmā containing about 800 houses. They are strongly fortified and well guarded against attack. The houses are built closely together, in spite of the frequency of destructive fires. The posts and rafters are of solid beams, and the roof at the sides reaches nearly to the ground. Those of the Lhotās and Aos are laid out in regular streets, but there is a complete lack of symmetry in the Angāmī and Semā villages.

Among the naked Nāgās the men are often completely destitute of clothing, and it is said that the women when working in the fields sometimes lay aside the narrow strip of cloth which is their solitary garment. At the opposite end of the scale come the Angāmīs, whose dress is effective and picturesque. Their spears and *daos* are ornamented with red goats' hair, and they wear gaiters and helmets of dyed cane, and brightly coloured sporrans. The Aos, too, have a nice taste in dress. But the Lhotās are an untidy dirty tribe; and the working dress for a man consists of a small cloth passed between the legs and fastened round the waist, which barely serves the purpose for which it is intended, while a woman contents herself with a cloth, about the size of an ordinary hand towel, round her waist. Both sexes are fond of ornaments, and used pigs' tusks, sections of an elephant's tusk, agates, carnelians, necklaces of beads, shells, and brass ear-rings. The weapons used by all the tribes are spears, shields, and *daos*, or billhooks. Their staple food is rice, but few things come amiss to a Nāgā, and they eat pigs, bison, dogs, *gui* (big lizards), and pythons, and any kind of game, however putrid. Like other hill tribes, they are great drinkers of fermented beer.

Oaths are generally confirmed by invoking the wrath of Heaven on the swearer if he tells a lie. An Angāmī who has sworn by the lives of his *khel* will never tell a lie. He bares one shoulder, and places his foot in a noose in which a piece of cow-dung has been placed before taking the oath. The most careful supervision is, however, necessary to ensure that the correct formula is employed, as by some verbal quibble he may exempt himself from all liability. The vanquished, too, occasionally eat dirt in a literal sense as testimony to the sincerity of their vows.

Adult marriage only is in vogue, and prior to the performance of

that ceremony the girls are allowed great latitude. Those of the Aos sleep in separate houses two or three together, and are visited nightly by their lovers. These lovers are, as a rule, members of the girl's own *khel*, whom she is debarred by custom from marrying; and, as illegitimate children are rare, it is to be presumed that abortion and infanticide are not unknown. The former practice is in vogue among the Aos, while of the Angāmīs it was said to have been the rule for the girl to retire alone into the jungle when she felt her time approaching, and strangle the baby, when it was born, with her own hands. The other tribes are not quite so frankly promiscuous as the Aos, but a Nāgā bride who is entitled to wear the orange blossom of virginity on the occasion of her marriage is said to be extremely rare. The following is a description of the marriage ceremony of the Angāmīs: The young man, having fixed his choice upon a certain girl, tells his father, who sends a friend to ascertain the wishes of her parents. If they express conditional approval, the bridegroom's father puts the matter further to the test by strangling a fowl and watching the way in which it crosses its legs when dying. If the legs are placed in an inauspicious attitude, the match is immediately broken off; but if this catastrophe is averted, the girl is informed of the favourable progress of the negotiations. At this stage, she can exercise a power of veto, as, if she dreams an inauspicious dream within the next three days, her suitor must seek a bride elsewhere; but if all goes favourably, the wedding day is fixed. Proceedings open with a feast at the bride's house, and in the evening she proceeds to her husband's home; but, though she sleeps there, he modestly retires to the bachelors' club. The next day brings more feasting, but night separates the young couple as before. On the third day they visit their fields together, but not till eight or nine days have elapsed is the village priest called in, and the happy pair allowed to consummate their wishes. The Angāmīs and the Aos do not, as a rule, pay money for their wives, but among the Lhotās and the Semās the father of the girl generally receives from 80 to 100 rupees. Divorces are not uncommon, especially in the case of the Angāmīs, who do not take more than one wife at a time. Widows are allowed to remarry, but those of the Angāmī tribe are expected to refrain from doing so if they have children.

The dead are, as a rule, buried in shallow graves in close vicinity to their homes. The funeral is an occasion for much eating and drinking, and among the Angāmīs the whole of a man's property is sometimes dissipated on his funeral baked meats. The friends of the deceased lament vociferously round the grave till the coffin has been lowered. The conclusion of the ceremony is thus described by the late Mr. McCabe, the officer who had most to do with the pacification of the hills:—

'At this stage of the proceedings, the friends of the deceased suddenly stopped sobbing, dried their eyes, and marched off in a most businesslike manner. A civilized Nāgā, who had been as demonstrative with his umbrella as his warrior friends had been with their spears, solemnly closed it and retired. A large basketful of *dhān* (rice), millet, *dāl* (pulse), and Job's-tears was now thrown into the grave, and over this the earth was rapidly filled in.'

The Aos, however, do not bury their dead, but place them in bamboo coffins and smoke them for a few weeks in the outer room of the house. The corpse is then removed to the village cemetery, and placed on a bamboo platform. This cemetery invariably occupies one side of the main road leading to the village gate.

During the father's lifetime his sons receive shares of his landed property as they marry, with the result that the youngest son usually inherits his father's house. The religion of the Nāgās does not differ materially from that of the other hill tribes in Assam. They have a vague belief in a future life, and attribute their misfortunes to the machinations of demons, whom they propitiate with offerings.

The custom which has attracted most attention, and which differentiates the Nāgās from other Tibeto-Burman tribes, such as the Bodos, Mīkīrs, Daflās, and sub-Himālayan people, is their strange craving for human heads. Any head was valued, whether of man, woman, or child; and victims were usually murdered, not in fair fight, but by treachery. Sometimes expeditions on a large scale were undertaken, and several villages combined to make a raid. Even then they would usually retire if they saw reason to anticipate resistance. Most Angāmīs over fifty have more than one head to their credit, and the chief interpreter in the Kohīmā court is said to have taken eighteen in his unregenerate days. Head-hunting is still vigorously prosecuted by Nāgās living beyond the frontier, and human sacrifices are offered to ensure a good rice harvest. A curious custom is the *genna*, which may affect the village, the *khel*, or a single house. Persons under a *genna* remain at home and do no work; nothing can be taken into or brought out of their village, and strangers cannot be admitted. Among other quaint beliefs, the Nāgās think that certain men possess the power of turning themselves into tigers, while the legend of the Amazons is represented by a village in the north-east, peopled entirely by women, who are visited by traders from the surrounding tribes, and thus enabled to keep up their numbers.

Agriculture.

The ordinary system of cultivation is that known as *jhūm*. The jungle growing on the hill-side is cut down, and the undergrowth is burned, the larger trees being left to rot where they lie. The ground is then lightly hoed over, and seeds of rice, maize, millet, Job's-tears (*Coix Lacryma*), chillies,

and various kinds of vegetables dibbled in. The same plot of land is cropped only for two years in succession, and is then allowed to lie fallow for eight or nine years. Further cropping would be liable to destroy the roots of *ikra* and bamboo, whose ashes serve as manure when the land is next cleared for cultivation, while after the second harvest weeds spring up with such rapidity as to be a serious impediment to cultivation. Cotton is grown, more especially on the northern ridges inhabited by the Lhotās and Aos, who bring down considerable quantities for sale to the Mārwāris of Golāghāt. A more scientific form of cultivation is found among the Angāmī Nāgās, whose villages are surrounded by admirably constructed terraced rice-fields, built up with stone retaining-walls at different levels, and irrigated by means of skilfully constructed channels, which distribute the water over each step in the series. This system of cultivation is believed to have extended northwards from Manipur, and to have been adopted by the Angāmīs, partly from their desire for better kinds of grain than Job's-tears and millet, as *jhūm* rice does not thrive well at elevations much exceeding 4,000 feet, and partly from a scarcity of *jhūm* land. It has the further advantage of enabling the villagers to grow their crops in the immediate neighbourhood of their homes, a consideration of much importance before the introduction of British rule compelled the tribes to live at peace with one another. Efforts are now being made to introduce this system of cultivation among the Aos and the Semās. The Nāgās do not use the plough, and the agricultural implements usually employed are light hoes, *daos*, rakes, and sickles. No statistics are available to show the cultivated area, or the area under different crops. Little attempt has been made to introduce new staples. Potatoes when first tried did not flourish, but subsequent experiment has been more successful.

Cattle are used only for food, and are in consequence sturdier and fatter animals than those found in the plains of Assam. The domesticated *mithan* (*Bos frontalis*) is also eaten; but the Nāgās, like other hill tribes in Assam, do not milk their cows.

The whole of the hills must once have been covered with dense evergreen forest; but the *jhūm* system of cultivation, which necessitates the periodical clearance of an area nearly five or six times as large as that under cultivation in any given year, is very unfavourable to tree growth. A 'reserved' forest, covering an area of 63 square miles, has recently been constituted in the north-east corner of the District. Elsewhere, the tribes are allowed to use or destroy the forest produce as they please. In the higher ridges oaks and pines are found, while lower down the most valuable trees are *gomari* (*Gmelina arborea*), *poma* (*Cedrela Toona*), *sam* (*Artocarpus Chaplasha*), and *uriam* (*Bischofia javanica*).

The District has never been properly explored, but the hills overlooking the Sibsāgar plain contain three coal-fields—the Nāzirā, the Jhānzi, and the Disai. The Nāzirā field is estimated to contain about 35,000,000 tons of coal, but little has been done to work it. The coal measures contain iron ore in the shape of clay ironstone and impure limonite, and petroleum is found in the Nāzirā and Disai fields.

The manufacturing industries of the Nāgā Hills are confined to the production of the few rude articles required for domestic use. The most important is the weaving of coarse thick cloth of various patterns, the prevailing colours being dark blue—in some cases so dark as to be almost black—with red and yellow stripes, white, and brown. Many of these cloths are tastefully ornamented with goat's hair dyed red and cowries. Iron spear-heads, *daos*, hoes, and rough pottery are also made. The Angāmī Nāgās display a good deal of taste in matters of dress, and a warrior in full uniform is an impressive sight; but the majority of the tribes wear little clothing, and only enough is woven to satisfy the wants of the household.

Trade and communications.

Wholesale trade is entirely in the hands of the Mārwāri merchants known as Kayahs. The principal imports are salt, thread, kerosene oil, and iron; and Kohīmā is the largest business centre. The Nāgās trade in cotton, chillies, and boats, which they exchange for cattle and other commodities from the plains. The most important trading villages are Khonoma, Mozema, and Lozemā, and the tribes who are keenest at a bargain are the Semās and Angāmīs. Members of the latter tribe sometimes go as far afield as Rangoon, Calcutta, and Bombay, but the Semās never venture beyond the boundaries of their own Province.

In 1903-4, 73 miles of cart-roads and 470 miles of bridle-paths were maintained in the District. The cart-road from Dimāpur to Manipur runs across the hills, connecting Kohīmā with the Assam-Bengal Railway. Generally speaking, the means of communication in the District are sufficient for the requirements of its inhabitants.

Administration.

For administrative purposes, the District is divided into two subdivisions, Kohīmā and Mokokchūng. The Deputy-Commissioner is stationed at Kohīmā, and has one Assistant, who is usually a European. Mokokchūng is in charge of a European police officer, and an engineer and a civil surgeon are posted to the District.

The High Court at Calcutta has no jurisdiction in the District, except in criminal cases in which European British subjects are concerned; the Codes of Criminal and Civil Procedure are not in force, and the Deputy-Commissioner exercises powers of life and death, subject to confirmation by the Chief Commissioner. Many disputes,

both of a civil and criminal nature, are decided in the village without reference to the courts. Theft is punished by the Nāgās with the utmost severity. If a man takes a little grain from his neighbour's field, he forfeits not only his own crop, but the land on which it has been grown, while theft from a granary entails expulsion from the village and the confiscation of the offender's property. Generally speaking, the policy of Government is to interfere as little as possible with the customs of the people, and to discourage the growth of any taste for litigation. Considering the short time that has elapsed since the Nāgās were redeemed from barbarous savagery, the amount of serious crime that takes place within the boundaries of the District is comparatively small.

Land revenue is not assessed, except on a small estate held by the American Baptist Mission. A tax at the rate of Rs. 3 per house is realized from the Angāmī Nāgās. For other Nāgās the rate is Rs. 2 and for foreigners Rs. 5.

The table below shows the revenue from house tax and the total revenue, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Revenue from house tax .	12	45	59	58
Total revenue . . .	24*	78	83	1,05

* Exclusive of forest receipts.

The civil police consist of 29 head constables and men under a sub-inspector, but their sphere of action does not extend beyond Kohīmā town and the Manipur cart-road. The force which is really responsible for the maintenance of order in the District is the military police battalion, which has a strength of 72 officers and 598 men. Prisoners are confined in a small jail at Kohīmā, which has accommodation for 32 persons.

Education has not made much progress in the hills since they first came under British rule. The number of pupils under instruction in 1890–1, 1900–1, and 1903–4 was 297, 319, and 647 respectively. At the Census of 1901 only 1·3 per cent. of the population (2·5 males and 0·1 females) were returned as literate. There were 1 secondary, 22 primary, and 2 special schools in the District in 1903–4, and 76 female scholars. More than two-thirds of the pupils at school were in primary classes. Of the male population of school-going age, 5 per cent. were in the primary stage of instruction. The total expenditure on education in 1903–4 was Rs. 6,000, of which Rs. 256 was derived from fees. About 32 per cent. of the direct expenditure was devoted to primary schools.

The District possesses 3 hospitals, with accommodation for 24 in-

patients. In 1904 the number of cases treated was 21,000, of whom 500 were in-patients, and 200 operations were performed. The expenditure was Rs. 5,000, the whole of which was met from Provincial revenues.

The advantages of vaccination are fully appreciated by the people, and, though in 1903–4 only 39 per 1,000 of the population were protected, this was largely below the average for the five preceding years.

[B. C. Allen, *District Gazetteer of the Nāgā Hills* (1905). A monograph on the Nāgā tribes is under preparation.]

Nāgamangala.—Northern *tāluk* of Mysore District, Mysore State, lying between 12° 40′ and 13° 3′ N. and 76° 35′ and 76° 56′ E., with an area of 401 square miles. The population in 1901 was 76,581, compared with 69,265 in 1891. The *tāluk* contains one town, Nāgamangala (population, 3,516), the head-quarters; and 366 villages. The land revenue demand in 1903–4 was Rs. 1,23,000. The Shimsha river forms part of the eastern boundary, while the Lokapāvani has its source in the south-west. Rocky hills in the north and west are partly covered with scrub jungle. West of Nāgamangala is a hill of talcose argillite, like potstone, used for pencils. There are about 130 tanks, 30 of them being large. The soil is generally poor and *rāgi* is the staple crop. Rice is almost the only 'wet crop.' The areca gardens were destroyed in the famine of 1878, but some coco-nut trees survived. Sheep are abundant. Fine draught bullocks are bred, Karadihalli being the centre for the breed of Hallikār cattle.

Nāgapatnam.—Subdivision, *tāluk*, and town in Tanjore District, Madras. *See* NEGAPATAM.

Nagar.—Chiefship in Kashmīr. *See* HUNZA-NAGAR.

Nagar Tāluka.—*Tāluka* of Thar and Pārkar District, Sind, Bombay, lying between 24° 14′ and 25° 2′ N. and 70° 31′ E., bordering on the Rann of Cutch, with an area of 1,618 square miles. The population fell from 41,178 in 1891 to 25,355 in 1901. The *tāluka* contains 31 villages, of which NAGAR PĀRKAR is the head-quarters. The density, 16 persons per square mile, is below the District average. The land revenue and cesses in 1903–4 amounted to Rs. 28,000. The *tāluka*, which grows chiefly *bājra*, depends for cultivation upon the rainfall and a few wells, and is therefore subject to famine.

Nagar Tāluk.—Western *tāluk* of Shimoga District, Mysore, lying between 13° 36′ and 14° 6′ N. and 74° 52′ and 75° 23′ E., with an area of 528 square miles. The population in 1901 was 40,455, compared with 42,841 in 1891. The *tāluk* contains two towns, Kalūrkatte (population, 918), the head-quarters, and NAGAR (715); and 205 villages. The land revenue demand in 1903–4 was Rs. 1,16,000. Except in the north the *tāluk* is surrounded by mountains and hills, the streams from which flow north-west, uniting in the Sharāvati. Those

in the south-west run directly down the Ghāts westward, and reach the sea at Coondapoor. In the north-west is the isolated Honnār *hobli* belonging to South Kanara, part of the endowments of a temple at Kollūr below the Ghāts. The principal mountain within the *tāluk* is Kodachādri (4,411 feet), in the north-west. North of this is the Kollūr *ghāt* road to the low country, and in the south-west the Haidargarh or Hosangadi *ghāt* road. The *tāluk* is purely Malnād or 'highland,' the whole densely wooded. The south is composed of a cluster of hills, in a basin formed by which is situated Nagar town, formerly called Bednūr. The most open part is the valley of the Sharāvati. West of this the country becomes wilder and wilder as the Ghāts are approached. East and north of the Sharāvati the country is generally more level. The forests here are dense and contain more timber-trees than the west, where the soil is shallower, with much laterite. Areca-nuts, pepper, cardamoms, and rice are the products of this region. There are no 'dry crops.' The areca-nuts are of the first quality, but the gardens largely belong to Brāhmans, who are dependent for their cultivation on imported labour. Rice is exported to the coast, and areca-nuts by way of Birūr to Bellary and Wālājāpet. All other articles of consumption and clothing are brought from the plain country, partly by merchants who come to buy areca-nuts, but chiefly by ryots from Tīrthahalli, Avinhalli, and Kollūr, either on bullocks or by porters.

Nagar Town.—Town in the Nagar *tāluk* of Shimoga District, Mysore, situated in 13° 49′ N. and 75° 2′ E., 55 miles west of Shimoga town. Population (1901), 715, less than half what it was before the removal of the *tāluk* head-quarters in 1893. The place was originally called Bidaruhalli, 'bamboo village'; about 1640 it became the capital of the Keladi kings under the name of Bidarūr or Bidanūr (Bednūr). It grew so rapidly that it is said to have contained nearly 100,000 houses, and was called Nagara ('the city'). The walls were 8 miles in circumference, and had ten gates. The city was taken in 1763 by Haidar Alī, who gave it the name Haidarnagar, established there his principal arsenal and mint, and encouraged merchants to settle in the place. It suffered much during the wars with Tipū Sultān, and in 1783 was captured by the British, but was retaken. Tipū desired to restore its prosperity, but his fanatical religious and other measures ruined the place. Nagar, as it was called from 1789, was a centre of the insurrection of 1830. The municipality, formed in 1881, became a Union in 1904. The receipts and expenditure during the ten years ending 1901 averaged Rs. 600. In 1903–4 they were Rs. 600 and Rs. 980.

Nagar Village (1).—Ancient capital of Bīrbhūm District, Bengal. *See* RĀJNAGAR.

Nagar Village (2).—Village in Tanjore District, Madras. *See* NEGAPATAM.

Nagar Village (3).—Village in the Kulū subdivision and *tahsīl* of Kāngra District, Punjab, situated in 32° 7′ N. and 77° 14′ E., on the left bank of the Beās river, 14 miles north of Sultānpur, the *tahsīl* head-quarters. Population (1901), 591. Nagar was the capital of the Kulū Rājās, whose ancient palace crowns an eminence looking down upon the river from a height of about 1,000 feet, and is now used as the residence of the Assistant Commissioner, Kulū. It was greatly damaged by the earthquake of April 4, 1905. It commands a magnificent view, and itself forms a striking feature of the village. Nagar is also the head-quarters of the Kulū Forest division and of the Assistant Engineer, Kulū, and contains a post and telegraph office.

Nāgarakhanda. — An ancient province corresponding generally with the Shikārpur *tāluk* of Shimoga District in Mysore. It was a 'seventy' province, and its capital was at Bandanikke, or Bandalikke, also called Bāndhavapura, now deserted and in ruins. According to an old inscription, Nāgarakhanda was at one time ruled by 'the wise Chandra Gupta.'

Nagaram Island.—Island in Godāvari District, Madras, lying between 16° 20′ and 16° 35′ N. and 81° 44′ and 81° 57′ E. It is surrounded by the western mouth of the Godāvari (Vasishta), a large branch of this called the Vainateyam, and the Bay of Bengal. The island has an area of 137 square miles, and is one of the most fertile parts of the fertile Godāvari District. The Gannavaram aqueduct across the Vainateyam connects it with the navigation and irrigation system of the Central Godāvari Delta. This work, the largest of its kind in the delta, consists of 49 arches of 40 feet span, and is constructed to carry 70,000 cubic yards of water per hour. It irrigates about 33,000 acres. A large part of the island is devoted to coco-nut plantations and plantain gardens.

Nagar Devla.—Town in the Pāchora *tāluka* of East Khāndesh District, Bombay, situated in 20° 35′ N. and 75° 16′ E., about 5 miles east of Kajgaon station. Population (1901), 6,050. West of the town is a ruined Hemādpanti temple of Mahādeo. The town contains a school for boys with 190 pupils.

Nagar Karnūl.—South-eastern *tāluk* of Mahbūbnagar District, Hyderābād State, with an area of 621 square miles. Its population in 1901, including *jāgīrs*, was 77,095, compared with 73,155 in 1891. The *tāluk* contained 146 villages, of which 19 are *jāgīr*. In 1905 some villages from this *tāluk* were transferred to Amrābād, and the number of *khālsa* villages in it is now 112. Nagar Karnūl (population, 2,428) is the head-quarters. The land revenue in 1901 was 2·5 lakhs. The Wanparti and Gopālpet *samasthāns* are situated to the

south-west, with populations of 62,293 and 16,301, and 124 and 35 villages, respectively. Their areas are about 599 and 169 square miles. Farther south lies the *samasthān* of Jatpol with 89 villages, a population of 31,613, and an area of about 429 square miles.

Nagarkot.—Ancient town in Kāngra District, Punjab. *See* KĀNGRA.

Nāgarkovil.—Town in Travancore State, Madras. *See* NĀGERCOIL.

Nagar Pārkar.—Head-quarters of the Nagar *tāluka* in Thar and Pārkar District, Sind, Bombay, situated in 24° 21′ N. and 70° 47′ E., 120 miles south of Umarkot. Population (1901), 2,454. It is connected by good roads with Islām Kot, Mithi, Adigaon, Pitāpur, Birāni, and Bela in Cutch. The manufactures include weaving and dyeing of cloth; and there is a local trade in wool, grain, coco-nuts, piece-goods, hides, and metals, besides a transit trade in grain, camels, cattle, wool, and *ghī*. The village is believed to be of some antiquity; about a mile distant is Sardhāra, with a temple to Mahādeo, and a spring sacred among Hindus. In 1859 Nagar Pārkar was the scene of a rebellion, for the suppression of which a British force was dispatched from Hyderābād. The ringleaders were transported for a term of years. Four miles north-west from Nagar Pārkar in Bhodisar are the remains of three ancient Jain structures, supposed to have been built in 1375 and 1449. The town contains a dispensary and two vernacular schools, attended by 152 pupils, of which one with 56 pupils is a girls' school.

Nāgaur.—Head-quarters of a district of the same name in the State of Jodhpur, Rājputāna, situated in 27° 12′ N. and 73° 44′ E., on the Jodhpur-Bīkaner Railway. Population (1901), 13,377. The town possesses a post office, an Anglo-vernacular school, and a hospital. The principal manufactures are brass and iron utensils, ivory toys, camel saddles, and cotton cloth. The town is said to take its name from its traditional founders, the Nāga Rājputs, and was held successively by Prithwī Rāj Chauhān, Muhammad Ghorī, and the chiefs of Jodhpur, save for a time when it was possessed by the Bīkaner chief by grant from Akbar, and by another Rāthor family by grant from Shāh Jahān. The town wall is more than 4 miles in length, between 2½ and 5 feet thick, and on the average 17 feet high. The battlements bear many Arabic and Persian inscriptions, obtained from mosques demolished by Mahārājā Bakht Singh in order to repair breaches caused in warfare. Of the numerous religious edifices, two Hindu temples and a five-domed mosque are especially noteworthy. The fort, rising above the town, has a double wall nearly a mile long, the outer being 25 feet and the inner 50 feet above the ground, with a thickness of more than 30 feet at the base and about 12 feet at the top. The principal objects of interest in the fort are some palaces, a fountain with seventeen jets (dating from Akbar's reign), a mosque erected by Shāh Jahān, and a cave claimed by both Hindus and Musalmāns

as a place of retreat for their former saints. The Nāgaur district furnishes a fine breed of bullocks, famous throughout Northern India. The village of Manglod (20 miles east of Nāgaur town) has a very old temple with a Sanskrit inscription dated A.D. 604, which records its repair during the reign of a king Dhuhlāna. This is the oldest inscription yet discovered in Jodhpur.

Nāgercoil (*Nāgarkovil*, 'the temple of the serpent').—Town in the Agastīswaram *tāluk* of Travancore State, Madras, situated in 8° 10′ N. and 77° 27′ E., within 7 miles of the Aramboli pass. Population (1901), 25,782, consisting of 20,045 Hindus, 2,570 Musalmāns, and 3,167 Christians. Once the capital of Travancore, it is now the head-quarters of a District and Sessions Judge, a Munsif, and other officials. The London Missionary Society maintains a college, schools, a printing press, and a hospital. The native Christian women turn out fine lace which commands a brisk sale.

Nagīna Tahsīl.—North-eastern *tahsīl* of Bijnor District, United Provinces, comprising the *parganas* of Nagīna, Barhāpura, and Afzalgarh, and lying between 29° 13′ and 29° 43′ N. and 78° 17′ and 78° 57′ E., with an area of 453 square miles. Population fell from 183,147 in 1891 to 156,898 in 1901. There are 464 villages and two towns: NAGĪNA (population, 21,412), the *tahsīl* head-quarters, and AFZALGARH (6,474). The demand for land revenue in 1903–4 was Rs. 2,76,000, and for cesses Rs. 49,000. The density of population, 346 persons per square mile, is the lowest in the District. The *tahsīl* contains a considerable area of forest. It is crossed by several small streams, and also by the Rāmgangā and its tributary the Khoh. The soil is rich, and irrigation is provided in the Nagīna *pargana* by small canals from the Khoh and Gāngan; but the climate is not healthy, and the considerable decrease of population between 1891 and 1901 is due to the unfavourable seasons ending with the excessive rain of 1894. Cultivation also suffers from the depredations of wild animals. In 1903–4 the area under cultivation was 197 square miles, of which 14 were irrigated. Canals supply the greater part of the irrigated area.

Nagīna Town.—Head-quarters of the *tahsīl* of the same name in Bijnor District, United Provinces, situated in 29° 27′ N. and 78° 26′ E., on the Oudh and Rohilkhand Railway, and at the terminus of a metalled road from Bijnor. Population (1901), 21,412, of whom 14,887 were Musalmāns. The early history of the town is unknown, but it is mentioned in the *Ain-i-Akbarī* as head-quarters of a *mahāl* or *pargana*. During the rise of the Rohilla power in the middle of the eighteenth century a fort was built here. In 1805 the place was sacked by the Pindāris under Amīr Khān, and from 1817 to 1824 it was the head-quarters of the newly-formed District called Northern Morādābād. During the Mutiny the town was the scene of several conflicts between

rival parties, as well as of the final defeat of the rebels on April 21, 1858, which crushed the revolt in Bijnor. Nagīna is a large and busy place, with good brick houses and paved streets, which drain into a tributary of the Khoh on the east and into the Karula on the west. It contains the old fort, now used as a *tahsīlī*, a dispensary, a *tahsīlī* school, and a branch of the American Methodist Mission. Nagīna has been a municipality since 1886. During the ten years ending 1901 the income and expenditure averaged Rs. 12,000. In 1903-4 the income was Rs. 18,000, chiefly from octroi (Rs. 15,000); and the expenditure was Rs. 18,000. A market is held twice a week, when there is a considerable trade in sugar, rice, and cotton. Nagīna is celebrated for the excellent workmanship of its carved ebony wares, such as walking-sticks, trays, boxes, &c., which are frequently inlaid with ivory. Large quantities of small glass phials are blown here, and exported to Hardwār for the pilgrims who carry away Ganges water in them. In former days matchlocks were largely made, and some iron-work is still produced. Hempen sacking and ropes and lacquered goods are also made. The *tahsīlī* school has 192 pupils, and the municipality aids 12 primary schools attended by 513 pupils.

Nāgod State (or Unchahra).—A *sanad* State in Central India, under the Political Agent in Baghelkhand, lying between 24° 12′ and 24° 39′ N. and 80° 28′ and 80° 53′ E., with an area of about 501 square miles. Until the eighteenth century the State was known as Unchahra, from the name of its original capital. It is cut up into two sections, the isolated *pargana* of Dhanwāhī, which lies east of Maihar, having been granted in 1859 in recognition of good services rendered during the Mutiny. The greater part of the territory is situated in the high-level plain to the east of the Pannā range, but a small portion falls within the hilly tract. Nāgod is watered by the Satnā river, a tributary of the Tons, and by several smaller streams, which are not, however, available for irrigation.

Geologically, Nāgod presents several features of interest. The greater part is covered with fine sandstones of the Bandair (Bhānder) series and the Sirbū shales. Limestone of a superior quality, known commercially as Nāgod limestone, is met with in the form of low hills close to the chief town, supplying the most valuable source of lime known in India. In 1828 Captain Franklin announced the existence of fossil remains in this rock; but subsequent search has failed to substantiate this discovery, which, as giving a clue to the age of the Vindhyans, would have been of the highest scientific importance. The famous Bhārhut *stūpa* was constructed of the Bandair sandstone, the excellence of which is proved by the marvellous sharpness of the carving on the fragments discovered.

The chiefs of Nāgod are Parihār Rājputs, one of the four Agnikula

clans, whose traditional home is on Mount Abu. The history of their migration into Bundelkhand and Baghelkhand is of considerable interest, but exceedingly difficult to unravel. In the seventh century the Gaharwārs held Bundelkhand, but were driven out or at least subordinated by an incursion of Parihār Rājputs from the west, who established themselves in the country lying between Mahoba and Mau (near Chhatarpur), and rapidly extended their sway over most of this region. In the ninth century they in their turn became subordinate to the great Chandel clan; and, though not exterminated, a large section was obliged to migrate still farther eastwards into Baghelkhand, where, according to their annals, Rājā Dhāra Singh seized the fort of Naro from the Telī Rājās in 1344. In 1478 Rājā Bhoja obtained Unchahra, which he made the chief town, and which remained so until 1720, when the capital was moved to Nāgod by Rājā Chain Singh. Later on the Parihārs lost to the Bundelās and Baghelas practically all their possessions, except the limited territory they now hold, and preserved this remnant only by submitting to their adversaries.

When the British became paramount after the Treaty of Bassein (1802), Nāgod was held to be tributary to Pannā, and was included in the *sanad* granted to that State in 1807. In recognition, however, of the fact that the territory had been in the possession of the family before the establishment of Chhatarsāl's power and had continued to be independent throughout the supremacy of the Bundelās and of Alī Bahādur, a separate *sanad* was granted to Lāl Sheorāj Singh in 1809 confirming him in his possessions. He was succeeded in 1818 by his son, Balbhadra Singh, who was deposed in 1831 for murdering his brother. His successor, Rāghavendra Singh, who was then a minor, received powers in 1838 and obtained a new *sanad*, succession dues to the value of Rs. 8,000 being paid to the British Government. He involved the State in debt, and it was placed under management in 1844. In the Mutiny the chief behaved most loyally in assisting Europeans, and in recognition of these services received a grant of eleven villages now forming the *pargana* of Dhanwāhī, which had belonged to the confiscated State of Bijerāghogarh. In 1862 he received a *sanad* of adoption, and in 1865 he again assumed management till his death in 1874. He was succeeded by his son, the present chief, Rājā Jādavendra Singh, who was then nineteen. The Rājā began to exercise powers in 1882, but was deprived of them in 1894 for mismanagement, and retired to Benares, where he lived as a recluse for ten years, refusing all inducements to return. In August, 1904, however, he agreed to accept an allowance and to reside at Satnā. The chief has the title of Rājā and receives a salute of 9 guns.

The antiquities of Nāgod are considerable, but have not, as yet, been fully investigated. The old routes from Mālwā and Southern India to

Kausāmbhī and Srāvastī probably met at or near Bhārhut (24° 37′ N. and 80° 53′ E.), where a magnificent Buddhist *stūpa* formerly stood, the remains of which were discovered by Sir Alexander Cunningham in 1873. Though entirely ruined, a large number of carved stones were recovered and placed in the Calcutta Museum. It must have originally been very similar to the great *stūpa* at Sānchī, though the railing is more ornamental, and possibly of later date. On one of the gateways a record[1] was discovered referring to its erection during the rule of the Sunga dynasty, who flourished in the second and first centuries B.C. A mediaevál temple was also exhumed close by. Other places of interest are Lālpahār, a hill near the *stūpa*, where there are a large cave and an inscribed record of the Kalachuri dynasty of 1158; Sankargarh; Khoh, formerly a large city and capital of the Teli Rājās, where several important records dating from A.D. 475 to 554 have been discovered; Bhumara, Majhgawān, Kari Talai, and Pataini Devī. At the last place is a small but well-preserved temple in the Gupta style of the fourth or fifth century, with some later Jain remains of the tenth and eleventh centuries.

The population of the State has been: (1881) 79,629, (1891) 84,097, and (1901) 67,092. The large decrease of 20 per cent. during the last decade is due to famine. Hindus number 55,989, or 84 per cent.; Animists, 8,701, mainly Gonds and Kols; and Musalmāns, 2,331. The State contains one town, UNCHAHRA, its old capital; and 336 villages. Baghelkhandī is the principal language, spoken by 85 per cent. of the population. About 86 per cent. of the inhabitants are supported by agriculture, 12 per cent. by general labour, and 2 per cent. by trade.

Of the total area, 223 square miles, or 45 per cent., are cultivated, of which only 343 acres are irrigable. Of the uncultivated area, 87 square miles are cultivable, 167 square miles are under forest, and the rest is waste. Rice and wheat each occupy 43 square miles, or 18 per cent. of the cropped area; *kodon*, 38 square miles, or 16 per cent.; gram, 37 square miles, or 15 per cent.; barley, 32 square miles, or 9 per cent.; *sāmān* and *kākun*, 24 square miles, or 10 per cent.; and *jowār*, 11 square miles.

Besides the Pannā-Satnā high road, metalled roads connect Nāgod with Unchahra and Unchahra with Parsmānia, 86 miles in all, of which 37 are maintained by the State. British post offices are maintained at Nāgod and Unchahra.

The State was in 1905 under superintendence, being managed by the Political Agent assisted by a *dīwān*. The total revenue from all sources is 1·7 lakhs, of which one lakh is derived from land. About Rs. 73,000 is alienated in grants to members of the chief's family and

[1] A. Cunningham, 'The Bhārhut Stūpa,' *Indian Antiquary*, vol. xiv, p. 138; vol. xxi, p. 225.

other *jāgīrdārs.* The principal heads of expenditure are Rs. 70,000 on general administration, including the expenditure of the chief, Rs. 20,000 on public works, and Rs. 12,000 on police. A twelve years' revenue settlement, based on the productiveness of the soil and its position as regards villages and the caste of the holder, was made in 1901. The incidence of the land revenue demand is Rs. 1-8 per acre of cultivated area, and 11 annas per acre of total area. About 159 square miles, or 32 per cent. of the total area, are alienated in grants. About 3 per cent. of the total population were able to read and write in 1901. The State contains eight schools and two hospitals.

Nāgod Village.—Capital of the State of the same name in Central India, situated in 24° 34′ N. and 80° 36′ E., on the Amrān river, 17 miles west of Satnā, on the Satnā-Pannā high road. Population (1901), 3,887. The name is derived from Nāga Vadha, 'the slaughter of the Nāgas,' from whom it is said to have been seized by the ancestors of the Nāgod chief. Nāgod became the capital of the State in 1720. It was a British cantonment in 1857; and on the mutiny of the wing of the 50th Regiment of Native Infantry stationed here, the chief placed his own forces at the disposal of the Political officer, and finally sent him with some other European refugees from Bāndā safely under escort to Jubbulpore. A British post office, a hospital, a school, and a *dak*-bungalow are situated in the place.

Nāgor.—Town in Jodhpur State, Rājputāna. *See* NĀGAUD.

Nagore.—Village in Tanjore District, Madras. *See* NEGAPATAM.

Nāgpur Division.—Southern Division of the Central Provinces, extending from 18° 42′ to 22° 24′ N. and from 78° 3′ to 81° 3′ E. It consists of a large plain lying along the southern base of the Sātpurā hill ranges, and comprised in the valleys of the Wardhā and Waingangā rivers, with a long strip of hilly country on the eastern border. The Nāgpur Division includes five Districts, as shown below:—

District.	Area in square miles.*	Population 1901.*	Land revenue and cesses, 1903-4, in thousands of rupees.
Wardhā	2,428	385,103	7,05
Nāgpur	3,840	751,844	10,94
Chānda	10,156	581,315	3,75
Bhandāra	3,965	663,062	5,34
Bālāghāt	3,132	325,371	2,78
Total	23,521	2,706,695	29,86

* The District figures of area and population have been adjusted to allow for some changes of territory which have taken place since the Census of 1901, including the projected transfer of part of Chānda District, with an area of 593 square miles, to the Madras Presidency.

Of these, Wardhā and Nāgpur in the valley of the Wardhā river on

the west, with shallow black soil and a light rainfall, constitute the most important cotton-growing tract in the Province, while Bhandāra and parts of Chānda and Bālāghāt in the valley of the Waingangā have been named the 'lake country' of Nāgpur, owing to the number of fine tanks constructed for the irrigation of rice. To the north of Bālāghāt and down the eastern side of Chānda stretch lines of hills approaching the Godāvari river in the extreme south of the Province. The head-quarters of the Commissioner are at NĀGPUR CITY. The population of the Division was 2,758,116 in 1881, and increased to 2,982,539 in 1891, or by 8 per cent., the decade having been generally prosperous. At the Census of 1901 the population had fallen to 2,728,063, or by 8½ per cent., the principal losses being in the eastern or rice Districts, which were severely affected by distress or famine in several years, while the population of the western or cotton Districts, which escaped more lightly, remained almost stationary. In 1901 Hindus numbered nearly 84 per cent. of the total, and Animists 13 per cent., while the followers of other religions included Musalmāns (86,931), Jains (6,624), and Christians (7,113), of whom 3,039 were Europeans and Eurasians. The total area is 23,521 square miles, and the density of population 115 persons per square mile. The Division contains 24 towns out of the Provincial total of 59, and 7,898 villages. Nāgpur city (population, 127,734), the head-quarters of the Central Provinces Administration, is the commercial centre, and KAMPTEE (38,888) is a cantonment 10 miles from Nāgpur. CHĀNDA, BHĀNDAK, and RĀMTEK contain interesting archaeological remains.

Nāgpur District.—District of the Central Provinces, lying between 20° 35′ and 21° 44′ N. and 78° 15′ and 79° 40′ E., in the plain to which it gives its name at the southern base of the Sātpurā Hills, with an area of 3,840 square miles. It is bounded on the north by Chhindwāra and Seonī; on the east by Bhandāra; on the south and west by Chānda and Wardhā; and along a small strip on the north-west by the Amraotī District of Berār. The greater part of Nāgpur District is an undulating plain, but it is traversed by low hill ranges. In the north a strip of the Sātpurā Hills is included within its limits, narrow on the west but widening to a breadth of 12 miles or more towards the east. Immediately south of them lies the western extremity of the Ambāgarh hills, on which stand the well-known temples of Rāmtek. On the western border another low range of hills runs down the length of the District, and, after a break formed by the valley of the Wunnā river, continues to the south-east past Umrer, cutting off on its southern side the valley of the Nand. A third small range called the Pilkāpār hills crosses the Kātol *tāhsil* from north to south. There are also a few detached hills, notably that of SĪTĀ-

Physical aspects.

BALDĪ in Nāgpur city, which is visible for a long distance from the country round. The hills attain no great altitude, the highest peaks not exceeding 2,000 feet, but vary greatly in appearance, being in places extremely picturesque and clothed with forest, while elsewhere they are covered by loose stones and brushwood, or are wholly bare and arid. The Wardhā and Waingangā rivers flow along part of the western and eastern borders respectively, and the drainage of the District is divided between them. The waters of about a third of its area on the west are carried to the Wardhā by the Jām, the Wunnā, and other minor streams. The centre is drained by the Pench and Kanhān, which, flowing south through the Sātpurā Hills, unite just above Kamptee, where they are also joined by the Kolar; from here the Kanhān carries their joint waters along the northern boundary of the Umrer *tahsīl* to meet the Waingangā on the Bhandāra border. To the east a few small streams flow direct to the Waingangā. The richest part of the District is the western half of the Kātol *tahsīl*, cut off by the small ranges described above. It possesses a soil profusely fertile, and teems with the richest garden cultivation. Beyond the Pilkāpār hills the plain country extends to the eastern border. Its surface is scarcely ever level, but it is closely cultivated, abounds in mango-groves and trees of all sorts, and towards the east is studded with small tanks, which form a feature in the landscape. The elevation of the plain country is from 900 to 1,000 feet above sea-level.

The primary formation of the rocks is sandstone, associated with shale and limestone. The sandstone is now covered by trap on the west, and broken up by granite on the east, leaving a small diagonal strip running through the centre of the District and expanding on the north-west and south-east. The juxtaposition of trap, sandstone, and granite rocks in this neighbourhood invests the geology of Nāgpur with special interest.

The forests are mainly situated in a large block on the Sātpurā Hills to the north-east, while isolated patches are dotted on the hills extending along the south-western border. The forest growth varies with the nature of the soil, *sāj* (*Terminalia tomentosa*), *achār* (*Buchanania latifolia*), and *tendū* (*Diospyros tomentosa*) being characteristic on the heavy soils, teak on good well-drained slopes, *salai* (*Boswellia serrata*) on the steep hill-sides and ridges, and satin-wood on the sandy levels. In the open country mango, *mahuā* (*Bassia latifolia*), tamarind, and bastard date-palms are common.

There is nothing noteworthy about the wild animals of the District, and from the sportsman's point of view it is one of the poorest in the Province. Wild hog abound all over the country, finding shelter in the large grass reserves or groves of date-palm. Partridges, quail,

and sand-grouse are fairly common; bustard are frequently seen in the south, and florican occasionally. Snipe and duck are obtained in the cold season in a few localities.

Nāgpur has the reputation of being one of the hottest places in India during the summer months. In May the temperature rises to 116°, while it falls on clear nights as low as 70°. During the rains the highest day temperature seldom exceeds 95°, and the lowest at night is about 70°. In the cold season the highest temperature is between 80° and 90°, and the lowest about 50°. Except for three months from April to June, when the heat is intense, and in September, when the atmosphere is steamy and the moist heat very trying, the climate of Nāgpur is not unpleasant.

The annual rainfall averages 46 inches, but less is received in the west than in the east of the District. Complete failure of the rainfall has in the past been very rare; but its distribution is capricious, especially towards the end of the monsoon, when the fate of the harvest is in the balance.

History.

There is no historical record of Nāgpur prior to the commencement of the eighteenth century, when it formed part of the Gond kingdom of Deogarh, in Chindwāra. Bakht Buland, the reigning prince of Deogarh, proceeded to Delhi, and, appreciating the advantages of the civilization which he there witnessed, determined to set about the development of his own territories. To this end he invited Hindu artificers and husbandmen to settle in the plain country, and founded the city of Nāgpur. His successor, Chānd Sultān, continued the work of civilization, and removed his capital to Nāgpur. On Chānd Sultān's death in 1739 there were disputes as to the succession, and his widow invoked the aid of Raghujī Bhonsla, who was governing Berār on behalf of the Peshwā. The Bhonsla family were originally headmen of Deorā, a village in the Sātāra District of Bombay, from which place their present representative derives his title of Rājā. Raghujī's grandfather and his two brothers had fought in the armies of Sivajī, and to the most distinguished of them was entrusted a high military command and the collection of *chauth* in Berār. Raghujī, on being called in by the contending Gond factions, replaced the two sons of Chānd Sultān on the throne from which they had been ousted by a usurper, and retired to Berār with a suitable reward for his assistance. Dissensions, however, broke out between the brothers; and in 1743 Raghujī again intervened at the request of the elder brother, and drove out his rival. But he had not the heart to give back a second time the country he held within his grasp. Burhān Shāh, the Gond Rājā, though allowed to retain the outward insignia of royalty, became practically a state pensioner, and all real power

passed to the Marāthās. Bold and decisive in action, Raghujī was the type of a Marāthā leader; he saw in the troubles of other states an opening for his own ambition, and did not even require a pretext for plunder and invasion. Twice his armies invaded Bengal, and he obtained the cession of Cuttack. Chānda, Chhattīsgarh, and Sambalpur were added to his dominions between 1745 and 1755, the year of his death. His successor Jānojī took part in the wars between the Peshwā and Nizām; and after he had in turn betrayed both of them, they united against him, and sacked and burnt Nāgpur in 1765. On Jānojī's death his brothers fought for the succession, until one shot the other on the battle-field of Pānchgaon, 6 miles south of Nāgpur, and succeeded to the regency on behalf of his infant son Raghujī II, who was Jānojī's adopted heir. In 1785 Mandlā and the upper Narbadā valley were added to the Nāgpur dominions by treaty with the Peshwā. Mudhojī, the regent, had courted the favour of the British, and this policy was continued for some time by his son Raghujī II, who acquired Hoshangābād and the lower Narbadā valley. But in 1803 he united with Sindhia against the British Government. The two chiefs were decisively defeated at Assaye and Argaon; and by the Treaty of Deogaon of that year Raghujī ceded to the British Cuttack, Southern Berār, and Sambalpur, the last of which was, however, relinquished in 1806.

To the close of the eighteenth century the Marāthā administration had been on the whole good, and the country had prospered. The first four of the Bhonslas were military chiefs with the habits of rough soldiers, connected by blood and by constant familiar intercourse with all their principal officers. Descended from the class of cultivators, they ever favoured and fostered that order. They were rapacious, but seldom cruel to the lower classes. Up to 1792 their territories were rarely the theatre of hostilities, and the area of cultivation and revenue continued to increase under a fairly equitable and extremely primitive system of government. After the Treaty of Deogaon, however, all this was changed. Raghujī had been deprived of a third of his territories, and he attempted to make up the loss of revenue from the remainder. The villages were mercilessly rack-rented, and many new taxes imposed. The pay of the troops was in arrears, and they maintained themselves by plundering the cultivators, while at the same time commenced the raids of the Pindāris, who became so bold that in 1811 they advanced to Nāgpur and burnt the suburbs. It was at this time that most of the numerous village forts were built, to which on the approach of these marauders the peasant retired and fought for bare life, all he possessed outside the walls being already lost to him.

On the death of Raghujī II in 1816, his son, an imbecile, was soon supplanted and murdered by the notorious Mudhojī or Appa Sāhib.

A treaty of alliance providing for the maintenance of a subsidiary force by the British was signed in this year, a Resident having been appointed to the Nāgpur court since 1799. In 1817, on the outbreak of war between the British and the Peshwā, Appa Sāhib threw off his cloak of friendship, and accepted an embassy and title from the Peshwā. His troops attacked the British, and were defeated in the brilliant action at SĪTĀBALDĪ, and a second time round Nāgpur city. As a result of these battles, the remaining portion of Berār and the territories in the Narbadā valley were ceded to the British. Appa Sāhib was reinstated on the throne, but shortly afterwards was discovered to be again intriguing, and was deposed and forwarded to Allahābād in custody. On the way, however, he corrupted his guards, and escaped, first to the Mahādeo Hills and subsequently to the Punjab. A grandchild of Raghujī II was then placed on the throne, and the territories were administered by the Resident from 1818 to 1830, in which year the young ruler known as Raghujī III was allowed to assume the actual government. He died without heirs in 1853, and his territories were then declared to have lapsed. Nāgpur was administered by a Commissioner until the formation of the Central Provinces in 1861. During the Mutiny a scheme for a rising was formed by a regiment of irregular cavalry in conjunction with the disaffected Muhammadans of the city, but was frustrated by the prompt action of the civil authorities, supported by Madras troops from Kamptee. Some of the native officers and two of the leading Muhammadans of the city were hanged from the ramparts of the fort, and the disturbances ended. The aged princess Bakā Bai, widow of Raghujī II, used all her influence in support of the British, and largely contributed by her example to keep the Marāthā districts loyal.

In several localities in the District are found circles of rough stones, occasionally extending over considerable areas. Beneath some of them fragments of pottery, flint arrow-heads, and iron implements, evidently of great antiquity, have been discovered. These were constructed by an unknown race, but are ascribed by the people to the pastoral Gaolīs, and are said to be their encampments or burial-places. The remains of the fort of Pārseonī, constructed of unhewn masses of rock, which are also ascribed to the Gaolīs, certainly date from a very early period. The buildings at RĀMTEK, KĀTOL, KELOD, and SAONER are separately described. Other remains which may be mentioned are the old Gond fort of Bhiugarh on the Pench river, and the temples of Adāsa and Bhugaon, and of Jākhāpur on the Saoner road.

Population.

The population of the District at the last three enumerations was as follows: (1881) 697,356; (1891) 757,863; (1901) 751,844. Between 1881 and 1891 the increase was nearly 9 per cent., the District having been generally prosperous

During the last decade the population has been almost stationary. The number of deaths exceeded that of births in the years 1894 to 1897 inclusive, and also in 1900. There was a considerable loss of population in the wheat-growing tracts of Nāgpur and Umrer, while the towns and the cotton lands of Kātol showed an increase. There are twelve towns—NĀGPUR CITY, the District head-quarters, KAMPTEE, UMRER, RĀMTEK, NARKHER, KHĀPA, KĀTOL, SAONER, KALMESHWAR, MOHPĀ, KELOD, and MOWĀR—and 1,681 inhabited villages. The urban population amounts to 32 per cent. of the total, which is the highest proportion in the Province. Some of the towns are almost solely agricultural, and these as a rule are now declining in importance. But others which are favourably situated for trade, or for the establishment of cotton factories, are growing rapidly. The following table gives the principal statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Nāgpur	871	4	417	296,117	340	+ 0.6	24,855
Rāmtek	1,129	2	451	156,663	139	− 0.3	3,820
Umrer	1,040	1	457	136,476	131	− 8.6	3,610
Kātol	800	5	356	162,588	200	+ 3.5	4,718
District total	3,840	12	1,681	751,844	193	− 0.8	37,003

About 88 per cent. of the population are Hindus, nearly 6 per cent. Muhammadans, and 5 per cent. Animists. There are 2,675 Jains and 481 Pārsīs. Three-fourths of the Muhammadans live in towns. Many of them come from Hyderābād and the Deccan, and they are the most turbulent class of the population. About 77 per cent. of the population speak Marāthī, 9 per cent. Hindī, 5½ per cent. Gondī, 5 per cent. Urdū, and 1 per cent. Telugu. It is noteworthy that nearly all the Gonds were returned at the Census as retaining their own vernacular.

The principal landholding castes are Brāhmans (23,000), Kunbīs (152,000), and Marāthās (11,000). The Marāthā Brāhmans naturally form the large majority of this caste, and, besides being the most extensive proprietors, are engaged in money-lending, trade, and the legal profession, and almost monopolize the better class of appointments in Government service. The Kunbīs are the great cultivating class. They are plodding and patient, with a strong affection for their land, but wanting in energy as compared with the castes of the northern Districts. The majority of the villages owned by Marāthās are included in the estates of the Bhonsla family and their relatives. A considerable proportion of the Government political pensioners are Marāthās. Many of them also hold villages or plots; but as a rule they are extravagant

in their living, and several of the old Marāthā nobility have fallen in the world. The native army does not attract them, and but few are sufficiently well educated for the more dignified posts in the civil employ of Government. Raghvīs (12,000), Lodhīs (8,000), and Kirārs (4,000), representing the immigrants from Hindustān, are exceptionally good cultivators. The Kirārs, however, are much given to display and incur extravagant expenditure on their dwelling-houses and jewellery, while the Lodhīs are divided by constant family feuds and love of faction. There are nearly 46,000 Gonds, constituting 6 per cent. of the population. They have generally attained to some degree of civilization, and grow rice instead of the light millets which suffice for the needs of their fellow tribesmen on the Sātpurās. The menial caste of Mahārs form a sixth of the whole population, the great majority being cultivators and labourers. The rural Mahār is still considered as impure, and is not allowed to drink from the village well, nor may his children sit at school with those of the Hindu castes. But there are traces of the decay of this tendency, as many Mahārs have become wealthy and risen in the world. About 58 per cent. of the population were returned as dependent on agriculture in 1901.

Christians number 6,163, of whom 2,870 are Europeans and Eurasians, and 3,293 natives. Of the natives the majority are Roman Catholics, belonging to the French Mission at Nāgpur. There are also a number of Presbyterians, the converts of the Scottish Free Church Mission. Nāgpur is the head-quarters of a Roman Catholic diocese, which supports high and middle schools for European and Eurasian children and natives, and orphanages for boys and girls, the clergy being assisted by French nuns of the Order of St. Joseph who live at Nāgpur and Kamptee. A mission of the Free Church of Scotland maintains a number of educational and other institutions at Nāgpur and in the interior of the District. Among these may be mentioned the Hislop aided college, several schools for low-caste children, an orphanage and boarding-school for Christian girls, and the Mure Memorial Hospital for women. A small mission of the Church of England is also located at Nāgpur, and one of the Methodist Episcopal Church at Kamptee.

Agriculture.

The prevailing soil is that known as black cotton. It seldom attains to a depth of 12 feet, and is superimposed on a band of conglomerate and brown clay. Rich black clay is found only in very small quantities, and the commonest soil is a dark loam mixed with limestone pebbles and of considerable fertility. The latter covers 65 per cent. of the cultivated area; and of the remainder, 27 per cent. consists of an inferior variety of the same soil, very shallow and mixed with gravel or sand, and occurring principally in the hilly country. Little really poor land is thus under cultivation.

About 383 square miles are held wholly or partially free of revenue,

and 2,500 acres of Government land have been settled on the *ryotwāri* system. The balance of the District area is held on the ordinary *mālguzāri* tenure. The following table shows the principal statistics of cultivation in 1903–4, areas being in square miles :—

Tahsil.	Total.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Nāgpur . .	871	578	3	149	42
Rāmtek . .	1,129	544	5	166	343
Umrer . . .	1,040	564	12	311	74
Kātol . . .	800	540	4	114	56
Total	3,840	2,226	24	740	515

Jowār and cotton are the principal crops, covering (either alone or mixed with the pulse *arhar*) 661 and 633 square miles respectively. Of other crops, wheat occupies 353 square miles, *til* 84 square miles, linseed 132 square miles, and gram 31 square miles. Cotton and *jowār* are grown principally in the west and centre of the District, rice in the east, where the rainfall is heavier, and wheat, linseed, and gram in the centre and south. The main feature of recent years is the increase in the area under autumn crops, cotton and *jowār*, which are frequently grown in rotation. The acreage of cotton alone and cotton with *arhar* has more than doubled since 1864, and that of *jowār* alone and *jowār* with *arhar* has risen by 23 per cent. This change is to be attributed mainly to the high prices prevailing for cotton, and partly also to the succession of unfavourable spring harvests which have lately been experienced. Wheat shows a loss of 146 square miles and linseed of 106 during the same period. There are two principal varieties of cotton, of which that with a very short staple but yielding a larger supply of lint is generally preferred. Cotton-seed is now a valuable commercial product. The recent years of short rainfall have had a prejudicial effect on the rice crop, the area under which is only 22 square miles as against 50 at settlement. Most of the rice grown is transplanted. A number of profitable vegetable and fruit crops are also grown, the most important of which are oranges, which covered 1,000 acres in 1903–4; chillies, nearly 6,000 acres; castor, nearly 4,000 acres; tobacco, 450 acres; and turmeric, 170 acres. About 17,000 acres were under fodder-grass in the same year. The leaf of the betel-vine gardens of Rāmtek has a special reputation, and it is also cultivated at Pārseonī and Mansar, about 130 acres being occupied altogether. *Kapūri pān* (betel-leaf) is grown for local consumption and *bengalā pān* for export.

The occupied area increased by 12 per cent. during the currency of the thirty years' settlement (1863–4), and has further increased by 3 per cent. since the last settlement (1893–5). The scope for yet

more extension is very limited. The area of the valuable cotton crop increases annually, and more care is devoted to its cultivation than formerly. Cotton fields are manured whenever a supply is available, and the practice of pitting manure is growing in favour. In recent years the embankment of fields with low stone walls to protect them from erosion has received a great impetus in the Kātol *tahsīl*. During the ten years ending 1904, Rs. 79,000 was advanced under the Land Improvement Loans Act for the construction of wells, tanks, and field embankments, and 1·77 lakhs under the Agriculturists' Loans Act.

Owing to the scarcity of good grazing grounds, the majority of the agricultural cattle are imported, only one-fourth being bred locally. The hilly country in the north of the Rāmtek *tahsīl* is the principal breeding ground. Cattle are imported from Berār, Chhindwāra, and Chānda. Buffaloes are kept for the manufacture of *ghī*. Goats are largely bred and sold for food, while the flocks are also hired for their manure. Cattle races take place annually at Silli in Umrer, at Irsī in Rāmtek, and at Sakardarā near Nāgpur, these last being held by the Bhonsla family. Large weekly cattle markets are held at Sonegaon, Kodāmendhī, Bhiwāpur, and Mohpā.

Only 24 square miles are irrigated, most of which is rice and the remainder vegetable and garden crops. Wheat occasionally gets a supply of water, if the cultivator has a well in his field. The District has 995 irrigation tanks and 4,302 wells. A project for the construction of a large reservoir at Rāmtek, to irrigate 40,000 acres and protect a further 30,000 acres, at an estimated cost of 16 lakhs, has been sanctioned.

Forests, &c.

The Government forests extend over 515 square miles, of which nearly 350 are situated on the foot-hills of the Sātpurās on both sides of the Pench river, and 170 consist of small blocks lying parallel to the Wardhā boundary, and extending from the west of Kātol to the south and east of Umrer. Small teak is scattered through the first tract, mixed with bamboos on the extreme north, but in no well-defined belts. Satin-wood, often nearly pure, is found on the sandy levels. The second tract contains small but good teak in its central blocks from Kātol to the railway, but poor mixed forests to the north, and chiefly scrub to the south in the Umrer *tahsīl*. Owing to the large local demand, the forests yield a substantial revenue. This amounted in 1903–4 to Rs. 63,000, of which Rs. 10,000 was realized from sales of timber, Rs. 16,000 from firewood, and Rs. 26,000 from grazing.

Deposits of manganese occur in several localities, principally in the Rāmtek *tahsīl*. A number of separate mining and prospecting leases have been granted, and a light tramway has been laid by one firm from Thārsa station to Wāregaon and Mandrī, a distance of about 15 miles. The total output of manganese in 1904 was 66,000 tons. Mines are

being worked at Mansar, Kandrī, Satak, Lohdongrī, Wāregaon, Kachurwāhi, Mandrī, Pāli, and other villages. A quarry of white sandstone is worked at Silewāra on the Kanhān river, from which long thin slabs well suited for building are obtained.

Trade and communications.

The weaving of cotton cloths with silk borders is the staple hand industry, the principal centres being Nāgpur city and Umrer. Gold and silver thread obtained from Burhānpur is also woven into the borders. The silk is obtained from Bengal and from China through Bombay, spun into thin thread, and is made up into different thicknesses locally. *Tasar* silk cocoons are received from Chhattīsgarh. A single cloth of the finest quality may cost as much as Rs. 150, but loin-cloths worth from Rs. 8 to Rs. 25 a pair, and *sārīs* from Rs. 3 to Rs. 25 each, are most in demand. White loin-cloths with red borders are woven at Umrer, the thread being dyed with lac, and coloured *sārīs* are made at Nāgpur. Cheap cotton cloth is produced by Momins or Muhammadan weavers at Kamptee and by Koshtīs at Khāpa. Coarse cloth is also woven by the village Mahārs, hand-spun thread being still used for the warp, on account of its superior strength, and is dyed and made up into carpets and mattresses at Saoner and Patansaongī. Sawargaon, Mowār, and Narkher also have dyeing industries. In 1901 nearly 13,000 persons were returned as supported by the silk industry, 39,000 by cotton hand-weaving, and 2,500 by dyeing. Brass-working is carried on at Nāgpur and Kelod, and iron betel-nut cutters and penknives are made at Nāgpur.

Nāgpur city has two cotton-spinning and weaving mills—the Empress Mills, opened in 1877, and the Swadeshi Spinning and Weaving Company, which started work in 1892. Their aggregate capital is 62 lakhs. Nāgpur also contains 12 ginning and 11 pressing factories, Kamptee 3 and 2, and Saoner 3 and 2, while one or more are situated in several of the towns and larger villages of the cotton tract. The majority of these factories have been opened within the last five years. They contain altogether 673 gins and 83 cotton-presses, and have an aggregate capital of 29 lakhs approximately. Nearly 11,000 persons were shown as supported by employment in factories in 1901, and the numbers must have increased considerably since then. The ginning and pressing factories, however, work only for four or five months in the year. The capitalists owning them are principally Mārwāri Baniās and Marāthā Brāhmans, and in a smaller degree Muhammadan Bohrās, Pārsīs, and Europeans.

Raw cotton and cotton-seed, linseed, *til*, and wheat are the staple exports of agricultural produce. Oranges are largely exported, and an improved variety of wild plum (*Zizyphus Jujuba*), which is obtained by grafting. The annual exports of oranges are valued at a lakh of rupees. Betel-leaf is sent to Northern India. Yarn and cotton cloth are sent

all over India and to China, Japan, and Burma by the Empress Mills, while the Swadeshi Mills find their best market in Chhattīsgarh. Hand-woven silk-bordered cloths to the value of about 5 lakhs annually are exported from Nāgpur city and Umrer to Bombay, Berār, and Hyderābād, the principal demand being from Marāthā Brāhmans. Manganese ore is now a staple export. Many articles of produce are also received at Nāgpur from other Districts and re-exported. Among these may be mentioned rice from Bhandāra and Chhattīsgarh, timber and bamboos from Chānda, Bhandāra, and Seonī, and bamboo matting from Chānda. Cotton and grain are also received from the surrounding Districts off the line of railway. Sea-salt from Bombay is commonly used, and a certain amount is also received from the Salt Hills of the Punjab. Mauritius sugar is imported, and sometimes mixed with the juice of sugar-cane to give it the appearance of Indian sugar, which is more expensive by one pound in the rupee. *Gur*, or refined sugar, comes from the United Provinces, and also from Bārsi and Sholāpur, in Bombay. Rice is imported from Chhattīsgarh and Bengal, and a certain amount of wheat from Chhindwāra is consumed locally, as it is cheaper than Nāgpur wheat. The finer kinds of English cotton cloth come from Calcutta, and the coarser ones from Bombay. Kerosene oil is bought in Bombay or Calcutta according as the rate is cheaper. The use of tea is rapidly increasing all over the District. Soda-water is largely consumed, about ten factories having been established at Nāgpur. Woollen and iron goods come from England. A European firm practically monopolizes the export trade in grain, and shares the cotton trade with Mārwāri Baniās and Marāthā Brāhmans. Lād Baniās export hand-woven cloth, and Muhammadans and Mārwāris manage the timber trade. Bohrās import and retail stationery and hardware, and Cutchī Muhammadans deal in groceries, cloth, salt, and kerosene oil. Kamptee has the largest weekly market, and the Sunday and Wednesday bazars at Nāgpur are also important. The other leading markets, including those for cattle which have already been mentioned, are at Gaorī and Kelod for grain and timber, and at Mowār for grain. A large fair is held at Rāmtek in November, at which general merchandise is sold, and small religious fairs take place at Ambhorā, Kudhāri, Adāsa, and Dhāpewāra.

The Great Indian Peninsula Railway from Bombay has a length of 27 miles in the District, with 3 stations and its terminus at Nāgpur city. From here the Bengal-Nāgpur Railway runs east to Calcutta, with 5 stations and 34 miles within the limits of the District. The most important trade routes are the roads leading north-west from Nāgpur city to Chhindwāra and Kātol, the eastern road to Bhandāra through Kūhi, and the north-eastern road to Seonī through Kamptee. Next to these come the southern roads through Mūl to Umrer, and to Chānda

through Borī, Jām, and Warorā. There is some local traffic along the road to Amraotī through Bāzārgaon. The District has 231 miles of metalled and 74 miles of unmetalled roads, and the annual expenditure on maintenance is Rs. 99,000. The Public Works department has charge of 253 miles of road, and the District council of 52 miles. There are avenues of trees on 185 miles, Nāgpur being better provided for in this respect than almost any other District in the Province. Considering its advanced state of development, the District is not very well supplied with railways, and there appears to be some scope for the construction of feeder lines to serve the more populous outlying tracts.

Famine.

Nāgpur District is recorded to have suffered from failures of crops in 1819, 1825-6, and 1832-3. There was only slight distress in 1869. In 1896-7 the District was not severely affected, as the *jowār*, cotton, *til*, and wheat crops gave a fair outturn. Numbers of starving wanderers from other Districts, however, flocked into Nāgpur city. Relief measures lasted for a year, the highest number in receipt of assistance being 18,000 in May, 1897, and the total expenditure was 5 lakhs. In 1899-1900 the monsoon failed completely, and only a third of a normal harvest was obtained. Relief measures lasted from September, 1899, to November, 1900, 108,000 persons, or 19 per cent. of the population, being in receipt of assistance in August, 1900. The total expenditure was 19·5 lakhs. The work done consisted principally of breaking up metal, but some tanks and wells were constructed, and the embankment of the reservoir at Ambājheri was raised.

Administration.

The Deputy-Commissioner has a staff of four Assistant or Extra-Assistant Commissioners. For administrative purposes the District is divided into four *tahsīls*, each of which has a *tahsīldār* and a *naib-tahsīldār*. Forests are in charge of a Forest officer of the Imperial service; and the Executive Engineer of the Nāgpur division, including Nāgpur and Wardhā Districts, is stationed at Nāgpur city.

The civil judicial staff consists of a District Judge and five Subordinate Judges, two Munsifs at Rāmtek and Kātol, and one at each of the other *tahsīls*, and a Small Cause Court Judge for Nāgpur city. The Divisional and Sessions Judge of the Nāgpur Division has jurisdiction in the District. Kamptee has a Cantonment Magistrate, invested with the powers of a Small Cause Court Judge.

Under the Marāthā administration the revenue was fixed annually. The Marāthās apparently retained as a standard the demand which they found existing when they received the country from the Gonds. This was called the *ain jamabandi*; and at the commencement of every year an amount varying partly with the character of the previous season, and partly with the financial necessities of the central Government, was fixed as the revenue demand. Increases of revenue were,

however, expressed usually as fractions on the *ain jamabandi.* The local officers or *kamaishdārs*, on receiving the announcement of the revenue assessed on their charge, called the *pātels* or headmen of villages together and distributed it over the individual villages according to their capacity. The *pātel* then distributed the revenue over the fields of the village, most of which had a fixed proportionate value which determined their share of the revenue. Neither headmen nor tenants had any proprietary rights, but they were not as a rule liable to ejectment so long as they paid the revenue. Under the earlier Marāthā rulers the assessment was fairly equitable; but after the Treaty of Deogaon the District was severely rack-rented, and villages were let indiscriminately to the highest bidder, while no portion of the rental was left to the *pātels*. At the commencement of the protectorate after the deposition of Appa Sāhib, there were more than 400 villages for which no headman could be found to accept a lease on the revenue demanded. The revenue was at once reduced by 20 per cent. Cultivation expanded during the management by the British, and some increase was obtained, the assessment being made for periods of from three to five years. During the subsequent period of Marāthā government the British system was more or less adhered to, but there was some decline in the revenue due to lax administration. Many of the cultivating headmen were also superseded by court favourites, who were usually Marāthā Brāhmans. The demand existing immediately prior to the first long-term settlement was 8·77 lakhs. The District was surveyed and settled in 1862–4 for a period of thirty years, the demand being fixed at 8·78 lakhs. On this occasion proprietary rights were conferred on the village headmen. During the currency of the thirty years' settlement, which was effected a few years before the opening of the railway to Bombay, the condition of the agricultural classes was extremely prosperous. The area occupied for cultivation increased by 12 per cent., and the prices of the staple food-grains by 140 per cent., while the rental received by the landowners rose by 20 per cent. On the expiry of this settlement, a fresh assessment was made between 1893 and 1895. The revenue demand was raised to 10·57 lakhs, or by 18 per cent. on that existing before revision, Rs. 75,000 of the revenue being 'assigned.' The experience of a number of bad seasons following on the introduction of the new assessment, during which the revenue was collected without difficulty, has sufficiently demonstrated its moderation. The average incidence of revenue per cultivated acre is R. 0–12–8 (maximum Rs. 1–4–11, minimum R. 0–6), while that of the rental is Rs. 1–0–3 (maximum Rs. 1–13–10, minimum R. 0–9–1). The new settlement is for a period varying from eighteen to twenty years in different tracts. The collections of land and total revenue in recent years are shown below, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	8,27	8,56	10,62	9,98
Total revenue . .	15,78	18,40	18,96	21,39

The management of local affairs outside municipal areas is entrusted to a District council and four local boards, each having jurisdiction over one *tahsīl.* The income of the District council in 1903-4 was Rs. 1,05,000, while the expenditure on public works was Rs. 34,000, on education Rs. 27,000, and on medical relief Rs. 6,000. NĀGPUR, RĀMTEK, KHĀPA, KALMESHWAR, UMRER, MOWĀR, and SAONER are municipal towns.

The police force—under a District Superintendent, who is usually aided by an Assistant Superintendent—consists of 1,006 officers and men, with a special reserve of 45. There are 2,130 village watchmen for 1,693 inhabited towns and villages. Nāgpur city has a Central jail, with accommodation for 1,322 prisoners, including 90 females. The daily average number of prisoners in 1904 was 710. Printing and binding, woodwork (including Burmese carving), cane-work, and cloth-weaving, are the principal industries carried on in the jail.

In respect of education the District stands third in the Province, nearly 5 per cent. of the population (9·2 males and 0·7 females) being able to read and write. The percentage of children under instruction to those of school-going age is 14. Statistics of the number of pupils are as follows: (1880-1) 10,696, (1890-1) 12,394, (1900-1) 14,991, (1903-4) 14,141, including 1,135 girls. The educational institutions comprise two Arts colleges, both at Nāgpur city, with 170 students, one of these, the Morris College, also containing Law classes with 42 students; 5 high schools, 16 English middle schools, 17 vernacular middle schools, and 147 primary schools. The District also contains two training schools and four other special schools. The expenditure on education in 1903-4 was 1·74 lakhs, of which 1 lakh was derived from Provincial and Local funds, and Rs. 30,000 from fees.

The District has 17 dispensaries, with accommodation for 201 in-patients. In 1904 the number of cases treated was 270,025, of whom 1,905 were in-patients, and 6,560 operations were performed. The expenditure was Rs. 40,000. Nāgpur city also contains a lunatic asylum with 142 inmates, a leper asylum with 30 inmates, and a veterinary dispensary.

Vaccination is compulsory only in the municipal towns of Nāgpur, Umrer, and Rāmtek. The number of persons successfully vaccinated in 1903-4 was 33 per 1,000 of the District population.

[R. H. Craddock, *Settlement Report* (1899). A District Gazetteer is being compiled.]

Nāgpur Tahsīl.—Central *tahsīl* of the District of the same name, Central Provinces, lying between 20° 46′ and 21° 23′ N. and 78° 44′ and 79° 19′ E., with an area of 871 square miles. The population in 1901 was 296,117, compared with 294,262 in 1891. The general density is 340 persons per square mile, and the rural density 136. The *tahsīl* contains four towns—Nāgpur City (population, 127,734), the head-quarters of the Province, District, and *tahsīl*, Kamptee (38,888), Kalmeshwar (5,340), and Saoner (5,281)—and 417 inhabited villages. Excluding 42 square miles of Government forest, 80 per cent. of the available area is occupied for cultivation. The cultivated area in 1903–4 was 578 square miles. The demand for land revenue in the same year was Rs. 2,76,000, and for cesses Rs. 26,000. The *tahsīl* comprises the fertile plains of Kalmeshwar and Nāgpur, the plateau of Kaurās, a continuation of the Kātol uplands, and the undulating Wunnā valley. Cotton and *jowār* are the principal crops, but there is a considerable area under wheat in the Kalmeshwar and Nāgpur plains.

Nāgpur City.—Capital of the Central Provinces, and head-quarters of the District and *tahsīl* of the same name, situated in 21° 9′ N. and 79° 7′ E., on the Great Indian Peninsula Railway, 520 miles from Bombay, and on the Bengal-Nāgpur Railway, 701 miles from Calcutta, the two lines meeting here. The city stands on a small stream called the Nāg, from which it takes its name. Its site is somewhat low, sloping to the south-east, with an open plain beyond, while to the north and west rise small basaltic hills, on one side of which is situated the fort of Sītābaldī, on another the residence of the Chief Commissioner, and on a third the great reservoir which supplies the city with water. Nāgpur is steadily increasing in importance, the population at the last four enumerations having been: (1872) 84,441, (1881) 98,229, (1891) 117,014, and (1901) 127,734. The population in 1901 included 104,476 Hindus, 17,368 Muhammadans, 760 Jains, 436 Pārsīs, and 3,794 Christians, of whom 1,780 were Europeans and Eurasians.

Nāgpur was founded at the beginning of the eighteenth century by the Gond Rājā, Bakht Buland. It subsequently became the head-quarters of the Bhonsla Rājās, and in 1861 of the Central Provinces Administration. The battles of Sītābaldī and Nāgpur were fought here in 1817. Two small riots have occurred in recent years—one in 1896 at the commencement of the famine, and one in 1899 on the enforcement of plague measures—but both were immediately suppressed without loss of life. Nāgpur itself possesses no archaeological remains of interest, but some sculptures and inscribed slabs have been collected in the Museum from various parts of the Province. The city is also singularly bare of notable buildings; and since the Bhonsla palace was burnt down in 1864, there is nothing deserving of mention. The residence of the present representative of the family is situated in the

Sakardarā Bāgh, about a mile from the city, where a small menagerie is maintained. But the two fine reservoirs of Ambājheri and Telinkherī to the west of the city, the Jumā *talao* (tank) between the city and the railway station, and the Mahārājbāgh and Telinkherī gardens form worthy monuments of the best period of Bhonsla rule, and have been greatly improved under British administration. The Mahārājbāgh also contains a menagerie. The hill and fort of Sītābaldī form a small cantonment, at which a detachment of infantry from the Kamptee garrison is stationed. Nāgpur is the head-quarters of two Volunteer battalions, whose combined strength in the station itself is five companies.

Nāgpur was constituted a municipality in 1864. The municipal receipts and expenditure during the decade ending 1901 averaged Rs. 3,28,000. In 1903–4 the income was Rs. 4,63,000, including octroi (Rs. 2,31,000), water rate (Rs. 34,000), and conservancy (Rs. 26,000); and the expenditure was Rs. 4,51,000, the chief items being refunds (Rs. 68,000), water-supply (Rs. 91,000), conservancy (Rs. 65,000), up-keep of roads (Rs. 15,000), drainage (Rs. 14,000), and repayment of loans (Rs. 22,000). The water-supply is obtained from the Ambājheri reservoir, distant four miles from the city. The works were first constructed in 1873, the embankment of the old tank being raised 17 feet, and pipes laid to carry water to the city by means of gravitation at a cost of 4 lakhs. In 1890 an extension was carried out at a cost of 3 lakhs to serve the higher parts of the city and civil station, which could not previously be supplied through want of sufficient head. The embankment was again raised by famine labour in 1900, and its present length is 1,033 yards, the greatest height being 35 feet. The catchment area of the tank is 6½ square miles, and the water surface 412 acres. In order to prevent the waterlogging of the site of the city, as a result of the constant intake from an extraneous source of supply, a scheme for a surface drainage system has now been undertaken. In addition to the drainage scheme a sewage farm is proposed, and the cost of the whole project is estimated at about 10 lakhs. A concession has recently been granted by the municipal committee for the construction of a system of electric tramway lines along the principal roads.

Nāgpur is the leading industrial and commercial town of the centre of India, its trade being principally with Bombay. The Empress Mills, in which the late J. N. Tāta was the chief shareholder, were opened in 1877. They contain 1,400 looms and 67,000 spindles, the present capital being 47 lakhs. Their out-turn of yarn and cloth in 1904 was valued at 61 lakhs, and they employ 4,300 operatives. The Swadeshi Spinning and Weaving Mills were opened in 1892 with a capital of 15 lakhs; they have 180 looms and 16,500 spindles, employ 1,100 operatives, and produced goods to the value of 14 lakhs in 1904. In

addition to the mills, twelve cotton-ginning and pressing factories containing 287 gins and 11 presses are now working, with an aggregate capital of 16·47 lakhs. The city contains eleven printing presses, with English, Hindī, and Marāthī type, and one English weekly and two native papers are published, besides the Central Provinces Law Reports. The principal hand industry is cotton-weaving, in which about 5,000 persons are engaged. They produce cotton cloths with silk borders and ornamented with gold and silver lace. Numbers of orange gardens have been planted in the vicinity of the city, and the fruit grown bears a very high reputation.

Nāgpur is the head-quarters of the Central Provinces Administration and of all the Provincial heads of departments, besides the Commissioner and Divisional Judge, Nāgpur Division, a Deputy-Postmaster-General, an Inspector of Schools, and Executive Engineers for Roads and Buildings and Irrigation. The Inspector-General of Agriculture for India, the Deputy-Comptroller of Post Offices, Bombay Circle, and the Archdeacon of Nāgpur also have their head-quarters here. It contains one of the two Provincial lunatic asylums and one of the three Central jails. Numerous industries are carried on in the Central jail, among which may be mentioned printing and binding, woodwork (including Burmese carving), cane-work, and cloth-weaving. All the forms and registers used in the public offices of the Province, amounting to about ten million sheets annually, are printed or lithographed in the Nāgpur jail, which contains thirty presses of different sizes. The Agricultural department maintains a model farm, which is devoted to agricultural experiment and research. The Victoria Technical Institute is now under construction as a memorial to the late Queen Empress. When finished it will take over the Agricultural and Engineering classes in the schools, and also teach various handicrafts. Nāgpur is the head-quarters of a Roman Catholic diocese, with a cathedral and convent. There is also a mission of the Free Church of Scotland, of which the Rev. S. Hislop, whose ethnographical and other writings on the Central Provinces are well-known, was for long a member. The Morris and Hislop Colleges prepare candidates for degrees in Arts; they are aided, but not maintained, by Government, and had 207 students in 1903-4. The Morris College also prepares candidates for degrees in Law, and 42 students are taking this course. The other educational institutions comprise three aided high schools, containing together 404 students; and, besides middle school branches attached to the high schools, four English middle schools, of which two are for Muhammadan and Telugu boys respectively, and forty-five primary schools. The St. Francis de Sales and Bishop's schools are for European boys, and the St. Joseph's Convent school for girls. They are attended by 520 children. The special institutions consist of male and female normal schools for

teachers, and the agricultural school. The normal schools train students to qualify for teaching in rural schools. They are entirely supported from Provincial revenues, and contain 39 male and 19 female students, both classes of whom receive stipends or scholarships. The agricultural school has 42 students; it is connected with the model farm, and gives instruction in improved methods and implements of agriculture to subordinate Government officials and the sons of landowners. The medical institutions comprise the Mayo and Dufferin Hospitals for males and females respectively, with combined accommodation for 112 in-patients, and 9 other dispensaries.

Nāhan State.—Native State in the Punjab. *See* SIRMŪR.

Nāhan Town.—Capital of the Sirmūr State, Punjab, situated in 30° 33′ N. and 77° 20′ E., on a picturesque range of the Outer Himalāyas, at an elevation of 3,207 feet. Population (1901), 6,256. Founded in 1621 by Rājā Karm Parkāsh, it has since been the residence of the Rājās and the capital of the State. West of the old town, in which is the Rājā's palace, lies the Shamsher cantonment for the State troops, while to the east is a small grassy plain surrounded by houses and public buildings. The town is administered by a municipal board, and possesses a school, a civil and a military hospital, a jail, a police station, and other offices. On a spur east of the town stands the Shamsher Villa, built in the Italian style by Rājā Sir Shamsher Parkāsh, G.C.S.I., in 1881. The iron foundry employs 600 men.

Nahr Sādikīyāh (or Cholistān).—*Tahsīl* in the Minchinābād *nizāmat*, Bahāwalpur State, Punjab, lying between 29° 29′ and 30° 18′ N. and 73° 7′ and 74° 1′ E., with an area of 625 square miles. The population in 1901 was 26,758, compared with 23,215 in 1891. It contains 127 villages. The *tahsīl* is called after the Sādikīyāh canal, which runs through it from end to end, and will, when completed, have a total length of 120 miles. The *tahsīl*, which has only recently been formed out of a portion of the Minchinābād *tahsīl*, will have its headquarters at the new town of Sādikganj, near the McLeodganj Road junction of the main line and the Ferozepore-McLeodganj Road branch of the Southern Punjab Railway. The land revenue and cesses in 1905–6 amounted to Rs. 41,000.

Naigawān Rebai (*Naigaon Rebai*).—A petty *sanad* State in Central India, under the Bundelkhand Agency, with an area of about 7 square miles. Population (1901), 2,497. The *jāgīrdār* is an Ahīr (*Daowa*) by caste. The land forming the *jāgīr* was originally included in the Jaitpur State, which lapsed in 1849. After British supremacy had been established in Bundelkhand, Lachhman Singh, then the leader of a marauding band, was induced to surrender on a promise of pardon; and a grant of five villages, with an estimated revenue of Rs. 15,000, was made to him in 1807. On his death, in 1808, his son

Jagat Singh succeeded. In 1850 it was held that Lachhman Singh's tenure was for life only, and that the holding should have been resumed on his death. Jagat Singh was, however, allowed to continue in possession; and in 1862 this ruling was reversed and the *jāgīrdār* received an adoption *sanad*. The present holder is Larai Dulhaiya, widow of Jagat Singh, who succeeded in 1867 with the sanction of Government, though no woman had before held the position of ruling chief in Bundelkhand. She has an adopted son, Kunwar Vishvanāth Singh, born in 1881, who has been recognized as her successor. The State contains 4 villages, with a cultivated area of 6 square miles, and a revenue of Rs. 11,000. The administration is carried on by the Thākurain herself, assisted by a *kāmdār*. The head-quarters of the estate are at Rebai, situated in 25° 21′ N. and 79° 29′ E., 18 miles north of Nowgong cantonment. Population (1901), 757. Until 1834 Naigawān (25° 11′ N. and 80° 54′ E.) was the chief place. The change in the head-quarters has given rise to the present name of the holding.

Naihāti.—Town in the Barrackpore subdivision of the District of the Twenty-four Parganas, Bengal, situated in 22° 54′ N. and 88° 25′ E., on the east bank of the Hooghly river. Population (1901), 13,604. Naihāti is a station on the Eastern Bengal State Railway and the junction of a branch railway across the Hooghly Bridge which connects with the East Indian Railway. An emigration dépôt is situated in the town; and at Gaurīpur there are large jute and oil-mills. Naihāti was constituted a municipality in 1869. The area within municipal limits has been greatly curtailed by the separation of the Bhātpāra municipality in 1899, and of the Hālisahar municipality in 1903. The income for the five years since its separation from Bhātpāra has averaged Rs. 21,000, and the expenditure Rs. 20,000. In 1903–4 the income was Rs. 13,700, including Rs. 5,000 derived from a tax on persons (or property tax); and the expenditure was Rs. 11,400.

Nainī Tāl District.—Southern District in the Kumaun Division, United Provinces, lying between 28° 51′ and 29° 37′ N. and 78° 43′ and 80° 5′ E., with an area of 2,677 square miles. It is bounded on the north by the Districts of Almorā and Garhwāl; on the east by Almorā and by Nepāl territory; on the west by Garhwāl and Bijnor; and on the south by Pīlībhīt, Bareilly, Morādābād, and the State of Rāmpur. About one-sixth of the District lies in the outer ranges of the Himālayas, the chief of which is known as GAGAR. These rise abruptly from the plains to a height of 6,000 or 7,000 feet, and are clothed with forest. The scenery is strikingly beautiful; and from the tops of the higher peaks, which reach a height of nearly 9,000 feet, magnificent views can be obtained of the vast level plain to the south, or of the

Physical aspects.

mass of the tangled ridges lying north, bounded by the great snowy range which forms the central axis of the Himālayas. Immediately below the hills stretches a long narrow strip of land called the BHĀBAR, in which the mountain torrents sink and are lost, except during the rains, beneath the boulder formation which they themselves have made. The Bhābar contains vast forest areas, and is scantily cultivated. The remainder of the District is included in the damp moist plain known as the TARAI and the KĀSHĪPUR *tahsīl*. On the northern edge of the Tarai springs appear, which gradually form rivers or small streams, and give a verdant aspect to the country throughout the year. Kāshīpur, in the south-west corner, is less swampy and resembles the adjoining tracts in Rohilkhand. None of the rivers in the District rises in the snowy range except the SĀRDĀ, which just touches the eastern boundary. The main drainage lines of the hill country are those of the Kosī, Golā, and Nandhaur. The Kosī rises in Almorā District, and the Golā and Nandhaur in the southern slopes of the outer hills. All three rivers eventually join the RĀMGANGĀ, the Golā being known in its lower courses as the Kichhā, and the Nandhaur as the Deohā and later as the Garrā. The smaller watercourses of the Bhābar and the Tarai are innumerable, and change their names every few miles, but all eventually drain into the Rāmgangā. In the hills are several lakes of some size and considerable beauty, the chief being Nainī Tāl, Bhīm Tāl, Malwā Tāl, Sāt Tāl, Naukuchhiyā Tāl, and Khurpā Tāl.

The Tarai consists of a zone of recently formed Gangetic alluvium, while the Bhābar is a gently sloping mass of coarse gravels still being formed from the débris brought down by streams from the hills. A sub-Himālayan zone of low hills, including the Kotāh Dūn, which resembles the SIWĀLIKS and the valley of the Nandhaur, contains deposits of the Upper Tertiary age, chiefly Nāhan sandstone. This zone is separated from the Himālayas by a reversed fault. The higher hills comprise an older set of slates and quartzites; a massive dark dolomite or limestone; beds of quartzite and basic lava-flows, and possibly other schistose and granitic rocks. The steep slopes acted on by heavy rainfall have from time to time given way in landslips of considerable size[1].

The flora of the District presents a great variety. In the Tarai the ordinary trees and plants of the plains are found. The Bhābar forests consist to a large extent of *sāl* (*Shorea robusta*); but as the hills are ascended the flora changes rapidly, and European trees and plants are seen[2].

[1] *Records, Geological Survey of India*, vol. xxiii, pts. i and iv, and vol. xxiv, pt. ii; T. H. Holland, *Report on Geological Structure of Hill Slopes near Nainī Tāl*.

[2] For a complete list of plants found, see chap. viii, *N.-W. P. Gazetteer*, vol. x, 1882.

Owing to the wide range of climate and elevation, most of the animals of both the plains and hills of Northern India are found in this District. A few elephants haunt the Bhābar and part of the Tarai, while tigers and leopards range from the plains to the hills. The wolf, jackal, and wild dog are also found. The Himālayan black bear lives in the hills, and the sloth bear in both the Bhābar and the Tarai. The *sāmbar* or *jarau*, spotted deer, swamp deer, hog deer, barking-deer, four-horned antelope, *nīlgai*, antelope, and *gural* also occur. Many kinds of snakes are found, including immense pythons which sometimes attain a length of 30 feet. The District is also rich in bird life; about 450 species have been recorded. Fish are plentiful, and fishing in the lakes and some of the rivers is regulated by the grant of licences.

The climate of the Tarai and to a lesser extent of the Bhābar is exceedingly unhealthy, especially from May to November. Few people, except the Thārus and Boksās, who seem fever-proof, are able to live there long. In the hills the climate is more temperate, and the annual range on the higher slopes is from about 26° in January, when snow falls in most years, to 85° in June.

The rainfall varies as much as the climate. At Kāshīpur, south of the Tarai, only 46 inches are received annually; while at Haldwānī, in the Bhābar, the average is nearly 77. Nainī Tāl is still wetter, and receives 95 inches annually, including snow.

Traditions connect many places in the hills with the story of the Mahābhārata. The earliest historical record is to be found in the visit of Hiuen Tsiang, who describes a kingdom of Govisāna, which was probably in the Tarai and Bhābar, and a kingdom of Brahmapura in the hills. The Tarai then appears to have relapsed into jungle, while the hills were included in the dominion of the Katyūrī Rājās, of whom little is known. They were succeeded by the Chands, who claimed to be Sombansī Rājputs from Jhūsī in Allahābād District, and first settled south of Almorā and in the Tarai. The Musalmān historians mention Kumaun in the fourteenth century, when Gyān Chand proceeded to Delhi and obtained from the Sultān a grant of the Bhābar and Tarai as far as the Ganges. The lower hills were, however, held by local chiefs, and Kīrati Chand (1488–1503) was the first who ruled the whole of the present District. When the Mughal empire was established the Musalmāns formed exaggerated ideas of the wealth of the hills, and the governor of the adjoining tract occupied the Tarai and Bhābar and attempted to invade the hills, but was foiled by natural difficulties. The *Ain-i-Akbarī* mentions a *sarkār* of Kumaun, but the *mahāls* included in it seem to refer to the submontane tract alone. The power of the Chand Rājās was chiefly confined to the hill tracts; but Bāz Bahādur (1638–78)

History.

visited Shāh Jahān at Delhi, and in 1655 joined the Mughal forces against Garhwāl, and recovered the Tarai. In 1672 he introduced a poll-tax, the proceeds of which were remitted to Delhi as tribute. One of his successors, named Debī Chand (1720–6), took part in the intrigues and conspiracies of the Afghāns of Rohilkhand and even faced the imperial troops, but was defeated. In 1744 Alī Muhammad, the Rohilla leader, sent a force into the Chand territory and penetrated through Bhīm Tāl in this District to Almorā; but the Rohillas were ultimately driven out. A reconciliation was subsequently effected; troops from the hills fought side by side with the Rohillas at Pānīpat in 1761, and the lowlands were in a flourishing state. Internal dissensions followed, and the government of the plains became separated from that of the hills, part being held by the Nawāb of Oudh and part by Brāhmans from the hills. In 1790 the Gurkhas invaded the hill tracts, and the Chands were driven to the Bhābar and finally expelled. The Tarai and Kāshīpur were ceded to the British by the Nawāb of Oudh in 1801 with the rest of Rohilkhand. In 1814 war broke out between the British and Nepālese, and a force marched from Kāshīpur in February, 1815. Almorā fell in two months and Kumaun became British territory. The later history of the District is a record of administrative details till 1857. The inhabitants of the hills took no part in the great Mutiny; but from June there was complete disorder in the plains, and large hordes of plunderers invaded the Bhābar. Unrest was spreading to the hills, when martial law was proclaimed by Sir Henry Ramsay, the Commissioner, and the danger passed. The rebels from Rohilkhand seized Haldwānī near the foot of the hills; and attempts were made to reach Nainī Tāl, but without success. By February, 1858, the rebels were practically cleared out of the Tarai, and there was no further trouble.

There are considerable areas of ruins in the Tarai and Bhābar which have not been properly explored. Near Kāshīpur bricks have been found bearing inscriptions of the third or fourth century A.D. The temple at Bhīm Tāl, built by Bāz Bahādur in the seventeenth century, is the chief relic of the Chands.

Population.

The District contains 7 towns and 1,513 villages. Population increased considerably between 1872 and 1891, but was then checked by a series of adverse seasons. The numbers at the four enumerations were as follows: (1872) 263,956, (1881) 339,667, (1891) 356,881, and (1901) 311,237. The Tarai and Bhābar contain a large nomadic population. There are four divisions, corresponding to the *tahsīls* of Districts in the plains: namely, NAINĪ TĀL, the BHĀBAR, the TARAI, and KĀSHĪPUR. The Bhābar is in charge of a *tahsīldār* stationed at Haldwānī, and the Tarai is under a *tahsīldār* at Kichhā. The principal towns are the municipalities

of NAINĪ TĀL, the District head-quarters, and KĀSHĪPUR, and the 'notified area' of Haldwānī. The following table gives the chief statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Nainī Tāl	433	1	451	43,738	101	− 5·2	3,735
Bhābar	1,279	4	511	93,445	73	− 6·7	5,138
Kāshīpur	189	2	147	55,632	294	− 24·0	2,313
Tarai	776	...	404	118,422	153	− 13·[illegible]	1,741
District total	2,677	7	1,513	311,237	116	− 12·7	12,927

About 75 per cent. of the population are Hindus, and more than 24 per cent. Musalmāns; but the latter are chiefly found in the Tarai and Kāshīpur. More than 67 per cent. of the total speak Western Hindī, 31 per cent. Central Pahārī, and 1 per cent. Nepālī or Gorkhālī.

In the hills and Bhābar the majority of the population is divided into three main castes—Brāhmans, Rājputs, and Doms. The two former include the Khas tribes classed respectively as Brāhmans and Rājputs. The Doms are labourers and artisans, while the Brāhmans and Rājputs are agriculturists. In the Tarai and Kāshīpur are found the ordinary castes of the plains, with a few peculiar to this tract. Rājputs altogether number 51,300; Brāhmans, 36,000; Doms, 33,000; and Chamārs, 23,000. The Thārus and Boksās, who are believed to be of Mongolian origin, number 16,000 and 4,000 respectively. They are the only people who can retain their health in the worst parts of the Tarai. In the hills are found three small, but peculiar, castes: the Bhotiās, who come from the border of Tibet; the Naiks, who devote their daughters to prostitution; and the Sauns, who are miners. Among Musalmāns the chief tribes are the Shaikhs (19,000), and Julāhās or weavers (13,000). The Rains (4,000) and the Turks (4,000) are found only in the submontane tract. Agriculture supports about 67 per cent. of the total population, and general labour 9 per cent.

Out of 659 native Christians in 1901, Methodists numbered 201, Roman Catholics 193, Presbyterians 59, and the Anglican communion 38. The American Methodist Episcopal Mission commenced work at Nainī Tāl in 1857.

Agriculture.

In the hill tracts the method of cultivation differs according to the situation of the land. Plots lying deep in the valleys near the beds of rivers are irrigated by small channels, and produce a constant succession of wheat and rice. On the hill-sides land is terraced, and *maruā*, or some variety of bean or pulse,

takes the place of rice in alternate years, while wheat is not grown continuously unless manure is available. In poorer land barley is grown instead of wheat. Potatoes are largely cultivated on the natural slope of hill-sides from which oak forest has been cut. Cultivation in the hills suffers from the fact that a large proportion of the population migrate to the Bhābar in the winter. Agricultural conditions in the Bhābar depend almost entirely on the possibility of canal-irrigation, and the cultivated land is situated near the mouth of a valley in the hills. Rice is grown in the autumn, and in the spring rape or mustard and wheat are the chief crops. Farther south in the Tarai and in Kāshīpur cultivation resembles that of the plains generally. In the northern portion the soil is light; but when it becomes exhausted, cultivation shifts. Lower down clay is found, which is continuously cultivated. Rice is here the chief crop; but in dry seasons other crops are sown, and the spring harvest becomes more important.

The tenures in the hill tracts have been described in the account of the KUMAUN DIVISION. In the Bhābar the majority of villages are managed as Government estates, the tenants being tenants-at-will and the village managed and the rents collected by a headman. There are also a few villages under *zamīndāri* tenures peculiar to the tract, in which tenants with the *khaikari* occupancy right of the hills are found. Most of the Tarai is also a Government estate. The cultivators, though mere tenants-at-will, are never dispossessed so long as they pay their rents. In Kāshīpur the tenures of the plains predominate, but a few villages are managed as Government estates. The main agricultural statistics for 1903–4 are given below, in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Nainī Tāl	433	54	13	19*
Bhābar	1,279	89	88	32*
Kāshīpur	189	69	10	75
Tarai	776	195	38	431
Total	2,677	407	149	557

* In demarcated area only.

No crop returns are prepared for the Nainī Tāl *tahsīl*, in which wheat, barley, rice, and *maruā* are the main food-crops, while a little tea and spices are also grown. Rice and wheat are the most important crops in the Tarai and Kāshīpur, covering 101 and 87 square miles respectively, or 38 and 33 per cent. of the net area cropped. Gram, maize, and barley are grown on smaller areas. Oilseeds cover 24 square miles, and a little sugar-cane and cotton are produced. There are five tea estates in the lower hills, but little tea is now made, and fruit-growing is becoming a more important industry.

The cultivated area in the hill tracts increased by nearly 50 per cent. between 1872 and 1902; but agricultural methods have not improved to any marked extent, except in the extension of irrigation and of potato cultivation. The cultivated area in the Bhābar has also increased, but is entirely dependent on canals. In the Tarai and Kāshīpur cultivation fluctuates considerably according to variations in the rainfall. Advances under the Land Improvement and Agriculturists' Loans Acts are small. They are not required in the hills or in the Bhābar.

The hill cattle are smaller than those of the plains; but neither breed is of good quality, though attempts have been made to introduce better strains. Enormous herds are brought from the Districts farther south for pasture during the hot season. Ponies of a small, but hardy, variety are bred in large numbers along the foot of the hills for use as pack-animals. Goats and sheep are of the ordinary type, and considerable flocks are driven up in the winter from the plains to the Tarai. In the hills goats are seldom used to supply milk, but are kept for their flesh and manure.

The total area irrigated in 1903–4 was 149 square miles. A few square miles are irrigated in the hills from channels drawn from the rivers and carried along hill-sides, besides irrigation from springs and water near the surface. The greater part of the irrigation in the rest of the District is from small canals. These are drawn in the Bhābar from the rivers which flow down from the hills, supplemented by lakes which have been embanked to hold up more water. Owing to the porous nature of the soil and gravel which make up that area, there is a great loss of water, and the channels are gradually being lined with masonry. More than 200 miles of canals have been built, commanding an area of 110 square miles. In the Tarai the small streams which rise as springs near the boundary of the Bhābar were formerly dammed by the people to supply irrigation. Immense swamps were formed and the tract became extremely unhealthy. Canals and drainage systems have, however, been undertaken. The canals are chiefly taken from the small streams and are 'minor' works. In the east the villagers themselves make the dams and channels. The more important canals are divided between the charges of the Engineer attached to the Tarai and Bhābar and of the Engineer of the Rohilkhand Canals.

Forests.

The forests of the District cover an area of about 1,510 square miles, of which about 900 are 'reserved' and 340 consist of 'protected' forests. They are situated partly in the submontane tract and partly in the hills. In the former tract the most valuable product is *sāl* (*Shorea robusta*); while *shīsham* (*Dalbergia Sissoo*), *haldu* (*Adina cordifolia*), and *khair* (*Acacia Catechu*) are also found. *Sāl* extends up to about 3,000 feet, and is then replaced by

various pines, especially *chīr* (*Pinus longifolia*), and ultimately by various kinds of oak (*Quercus semecarpifolia*, *incana*, and *dilatata*). The whole of the waste land in the hill tracts has now been declared 'protected' forest to prevent further denudation, which had begun to threaten the cultivation in the river-beds. Most of the 'reserved' forest area is included in the Nainī Tāl, Kumaun, and Garhwāl forest divisions, and accounts are not kept separately for the District. The receipts are, however, large, amounting to 2 or 3 lakhs annually.

The mineral products are various, but have not proved of great value. Building stone is abundant, and lime is manufactured at several places. Iron was worked for a time both by Government and by private enterprise; but none is extracted now. Copper is also to be found, but is not worked. A little gold is obtained by washing the sands of the Dhelā and Phīkā rivers; and other minor products are alum, gypsum, and sulphur.

Trade and communications.

Cotton cloth of good quality is largely woven in the south-west of the District, especially at Jaspur, and is dyed or printed locally for export to the hills. Elsewhere only the coarsest material is produced for local use. In the hill tracts a coarse kind of cloth, sacking, and ropes are woven from goat's hair. There are no other industries of importance. A brewery is situated close to Nainī Tāl, which employs about 50 hands.

The District as a whole imports piece-goods, salt, and metals, while the chief exports are agricultural and forest produce. The hill tracts supply potatoes, chillies, ginger, and forest produce, and import grain from the Bhābar. The surplus products of the latter tract consist of grain, forest produce, and rapeseed. There is little trade to or from the Tarai. A considerable through traffic between the interior of the Himālayas and the plains is of some importance to this District. Nainī Tāl is the chief mart in the hills, while Haldwānī, Rāmnagar, Chorgalliā, and Kālādhūngī in the Bhābar, and Jaspur and Kāshīpur are the principal markets in the plains.

The only railway is the Rohilkhand-Kumaun line from Bareilly to Kāthgodām at the foot of the hills below Nainī Tāl; but extensions are contemplated from Lālkuā on this line via Kāshīpur to Rāmnagar, and from Morādābād on the Oudh and Rohilkhand Railway to Kāshīpur. There are 737 miles of road, of which 173 are metalled and are in charge of the Public Works department. The cost of the metalled roads is charged to Provincial revenues, while 226 miles of unmetalled roads are maintained by the District board, and 337 by the Tarai and Bhābar estate funds. The chief road is that from Bareilly through Kāthgodām to Rānīkhet and Almorā, passing close to Nainī Tāl. Another road from Morādābād through Kāshīpur and Rāmnagar also leads to Rānīkhet.

Famine. Famine is practically unknown in the District, though high prices cause distress among the lowest classes. A serious failure of rain in the hills has never happened; and although deficiency injures the crops, the hill people depend largely on the Bhābar, in which irrigation is drawn from permanent sources. The Tarai suffers more from excessive rain than from drought, and the canal system protects every part of the low country except Kāshīpur, where scarcity was experienced in 1896.

Administration. The District is in charge of a Deputy-Commissioner, who is ordinarily assisted by a member of the Indian Civil Service and by a Deputy-Collector, who are stationed at Nainī Tāl. The Kāshīpur *tahsīl* forms a subdivision in charge of another Deputy-Collector, who resides at Kāshīpur except during the rains. A special superintendent manages the Tarai and Bhābar Government estates. A *tahsīldār* is stationed at the head-quarters of each *tahsīl* except Nainī Tāl and Kāshīpur, where there is a *naib-tahsīldār*. In addition to the ordinary District staff, an Engineer is in charge of canals and other public works in the Government estates, and the forests are divided between several forest divisions.

Naini Tāl is administered as a non-regulation tract, and the same officers exercise civil, revenue, and criminal jurisdiction. In civil matters the Commissioner of Kumaun sits as a High Court, while the Deputy-Commissioner has powers of a District Judge, and his assistants and the *tahsīldārs* have civil powers for the trial of suits. The Commissioner is also Sessions Judge in subordination to the High Court at Allahābād. There is little crime in the hill tracts; but dacoity is fairly common in the Tarai and Bhābar, and this is the most serious form of crime. The proximity of the State of Rāmpur favours the escape of criminals.

A District of Nainī Tāl was first formed in 1891. Before that date the hill tracts and the Bhābar had been included in what was then the Kumaun, but is now called the ALMORĀ DISTRICT. The *parganas* included in Kāshīpur and the Tarai were for long administered as parts of the adjoining Districts of Morādābād and Bareilly. About 1861, after many changes, a Tarai District was formed, to which in 1870 Kāshīpur was added. The tract was at the same time placed under the Commissioner of Kumaun.

The first settlement of the hill tracts and the Bhābar in 1815 was based on the demands of the Gurkhas and amounted to Rs. 17,000, the demand being levied by *parganas* or *pattis* (a subdivision of the *pargana*), and not by villages, and being collected through headmen. Short-term settlements were made at various dates, in which the revenue fixed for each *patti* was distributed over villages by the *zamīndārs*

themselves. The first regular settlement was carried out between 1842 and 1846, and this was for the first time preceded by a partial survey where boundary disputes had occurred, and by the preparation of a record-of-rights. The revenue so fixed amounted to Rs. 36,000. A revision was carried out between 1863 and 1873; but the management of the Bhābar had by this time been separated from that of the hills. In the latter a more detailed survey was made. Settlement operations in the hills differ from those in the plains, as competition rents are non-existent. The valuation is made by classifying soil, and estimating the produce of each class. The revenue fixed in the hill *pattīs* alone amounted to Rs. 34,900, which was raised to Rs. 50,300 at the latest assessment made between 1900 and 1902. The latter figure includes the rent of potato clearings, which are treated as a Government estate, and also revenue which has been 'assigned,' the actual sum payable to Government being Rs. 43,100. There was for many years very little advance in cultivation in the Bhābar, the revenue from which in 1843 was only Rs. 12,700. In 1850 it was placed in charge of Captain (afterwards Sir Henry) Ramsay, who was empowered to spend any surplus above the fixed revenue on improving the estate. The receipts at once increased by leaps and bounds, as irrigation was provided and other improvements were made. Revenue continued to be assessed as in the hills in the old settled villages, while the new cultivation was treated as a Government estate. The first revision in 1864 yielded Rs. 60,000, of which Rs. 4,000 represented rent; and the total receipts rose to a lakh in 1869, 1·4 lakhs in 1879, nearly 2 lakhs in 1889, and 2·4 lakhs in 1903. Of the latter figure, Rs. 57,000 is assessed as revenue and Rs. 1,85,000 as rent. The greater part of the Tarai is held as a Government estate, and its fiscal history is extremely complicated, as portions of it were for long administered as part of the adjacent Districts. The land revenue in 1885 amounted to Rs. 70,000 and the rental demand to about 2 lakhs. The latter item was revised in 1895, when rents were equalized, and the rental demand is now about 2·5 lakhs. Kāshīpur was settled as part of Morādābād District, and at the revisions of 1843 and 1879 the revenue demand was about a lakh. A revision has recently been made. The total demand for revenue and rent in Nainī Tāl District is thus about 7 lakhs. The gross revenue is included in that of the KUMAUN DIVISION.

There are two municipalities, KĀSHĪPUR and NAINĪ TĀL, and one 'notified area,' HALDWĀNĪ, and four towns are administered under Act XX of 1856. Beyond the limits of these, local affairs are managed by the District board; but a considerable expenditure on roads, education, and hospitals is incurred in the Government estates from Provincial revenues. The District board had in 1903-4 an income

of Rs. 37,000 and an expenditure of Rs. 82,000, including Rs. 42,000 spent on roads and buildings.

The Superintendent of police and a single circle inspector are in charge of the whole of the Kumaun Division. In the hill tract of this District there are no regular police, except in the town of Nainī Tāl and at three outposts, the duties of the police being discharged by the *patwāris*, who have a higher position than in the plains. There is one reserve inspector; and the force includes 37 subordinate officers and 135 constables, besides 83 municipal and town police, and 152 rural and road police. The number of police stations is 11. A jail has recently been built at Haldwānī.

The population of Nainī Tāl District is above the average as regards literacy, and 4.2 per cent. (7.1 males and 0.5 females) could read and write in 1901. The Musalmāns are especially backward, only 2 per cent. of these being literate. In 1880–1 there were only 16 public schools with 427 pupils; but after the formation of the new District education was rapidly pushed on, and by 1900–1 the number of schools had risen to 60 with 1,326 pupils. In 1903–4 there were 93 public schools with 2,277 pupils, including 82 girls, besides 13 private schools with 170 pupils. Only 200 pupils in public and private schools were in advanced classes. Two schools were managed by Government and 77 by the District and municipal boards. The expenditure on education was Rs. 12,000, provided almost entirely from Local and Provincial funds. These figures do not include the nine European schools in NAINĪ TĀL TOWN, which contain about 350 boys and 250 girls.

There are 14 hospitals and dispensaries in the District, with accommodation for 104 in-patients. In 1903 the number of cases treated was 78,000, of whom 1,040 were in-patients, and 1,687 operations were performed. The expenditure amounted to Rs. 49,000.

In 1903–4 the number of persons successfully vaccinated was 11,000, giving an average of 37 per 1,000.

[J. E. Goudge, *Settlement Report, Almorā and Hill Pattīs of Nainī Tāl* (1903); H. R. Nevill, *District Gazetteer* (1904).]

Nainī Tāl Tahsīl.—A portion of Nainī Tāl District, United Provinces, comprising the *parganas* of Dhyānirao, Chhakhātā Pahār, Pahār Kotā, Dhaniyākot, Rāmgarh, Kutaulī, and Mahrūrī, and lying between 29° 9′ and 29° 37′ N. and 79° 9′ and 79° 56′ E., with an area of 433 square miles. Population fell from 46,139 in 1891 to 43,738 in 1901. There are 451 villages, but only one town, NAINĪ TĀL, which is the District head-quarters in the hot season (population, 7,609 in winter and 15,164 in summer). The demand for land revenue in 1903–4 was Rs. 33,000, and for cesses Rs. 5,000. The density of population, 101 persons per square mile, is higher than in the Himālayan tracts generally. This tract lies entirely in the hills, and is

under the charge of a *peshkār* or *naib-tahsīldār*. In 1903-4 the area under cultivation was 54 square miles, of which 13 were irrigated either by small channels from rivers or by canals.

Nainī Tāl Town.—Head-quarters of Nainī Tāl District, United Provinces, with cantonment, situated in 29° 24′ N. and 79° 28′ E., in a valley of the GAGAR range of the Outer Himālayas. Population, 15,164 in September, 1900, and 7,609 in March, 1901, including that of the small cantonment. Up to 1839 the place was resorted to only by the herdsmen of surrounding villages, and though it was mentioned by the Commissioner in official reports, he does not appear to have visited it. It was then discovered by a European, and from 1842 it increased rapidly in size and prosperity. At the time of the Mutiny, Nainī Tāl formed a refuge for the fugitives from the neighbouring Districts in Rohilkhand. Soon afterwards it became the summer head-quarters of Government, and it is now also the head-quarters of the Commissioner of Kumaun and of a Conservator of Forests. In September, 1880, after three days' continuous rain, a landslip occurred, which caused the death of forty-three Europeans and 108 natives, besides damage to property amounting to about 2 lakhs. Since this disastrous occurrence a complete system of drainage has been carried out at great expense. The valley contains a pear-shaped lake, a little more than two miles in circumference, with a depth of 93 feet. On the north and south rise steep hill-sides clothed with fine forest trees, among which oaks predominate. On the western bank is situated a considerable area of more gently sloping land, from which a level recreation-ground has been excavated. The upper bazar stands above this, and the houses occupied by the European residents are scattered about on the sides of the valley. East of the lake the lower bazar is built on the outer edge of the range. The surface of the lake is 6,350 feet above sea-level; and the highest peaks are Chīnā (8,568) on the north, Deopāthā (7,987) on the west, and Ayarpāthā (7,461) on the south. The residence of the Lieutenant-Governor, completed in 1900, is a handsome building standing in spacious grounds. The principal public buildings include the Government Secretariat, the District offices, the Ramsay Hospital for Europeans, and male and female dispensaries for natives. There is also an important station of the American Methodist Mission. Nainī Tāl has been a municipality since 1845. During the ten years ending 1901 the income and expenditure averaged 1½ lakhs, including loan funds. The income in 1903-4 was 1·7 lakhs, including house tax (Rs. 34,000), tolls (Rs. 93,000), water-rate (Rs. 23,000), and conservancy tax (Rs. 21,000); and the expenditure was 1·4 lakhs, including repayment of loans and interest (Rs. 23,000), maintenance of water-supply and drainage (Rs. 34,000), and conservancy (Rs. 26,000). Drinking-water is derived from springs,

and is pumped up to reservoirs at the top of hills and distributed by gravitation. More than 4 lakhs has been spent on water-supply and drainage, and the introduction of a scheme of electric light is contemplated. The trade of the town chiefly consists in the supply of the wants of the summer visitors; but there is some through traffic with the hills. Three schools for natives have 220 pupils, and five European schools for boys have 350 pupils and four for girls 250.

Nainwah.—Town in Būndi State, Rājputāna. *See* NAENWA.

Najībābād Tahsīl.—Northern *tahsīl* of Bijnor District, United Provinces, comprising the *parganas* of Najībābād, Kīratpur, and Akbarābād, and lying between 29° 25′ and 29° 58′ N. and 78° 7′ and 78° 31′ E., with an area of 396 square miles. Population fell from 156,873 in 1891 to 153,896 in 1901. There are 422 villages and two towns: NAJĪBĀBĀD (population, 19,568), the *tahsīl* head-quarters, and KĪRATPUR (15,051). The demand for land revenue in 1903–4 was Rs. 2,75,000, and for cesses Rs. 45,000. The density of population, 389 persons per square mile, is much below the District average. The *tahsīl* contains a considerable area of forest, besides a hilly tract which is uninhabited. The northern portion is scored by torrents, which are dry for eight months in the year but scour deep ravines during the rains. Numerous other streams cross the rich alluvial plain which constitutes the rest of the *tahsīl*, the chief being the Mālin. The Ganges forms the western boundary. In 1903–4 the area under cultivation was 188 square miles, of which only 7 were irrigated. A small private canal from the Mālin serves about one square mile, but rivers are the chief source of supply.

Najībābād Town.—Head-quarters of the *tahsīl* of the same name in Bijnor District, United Provinces, situated in 29° 37′ N. and 78° 21′ E., at the junction of the main line of the Oudh and Rohilkhand Railway with the branch to Kotdwāra in Garhwāl. Population (1901), 19,568. Najībābād was founded by Najīb-ud-daula, paymaster and for a time Wazīr of the Mughal empire, who built a fort at Patthargarh, a mile to the east, in 1755. In 1772 the town was sacked by the Marāthās, and in 1774 it passed into the hands of the Nawāb of Oudh. During the Mutiny Mahmūd, great-grandson of Najīb-ud-daula, revolted, and in 1858, when the place was recovered, the palace was destroyed. Najībābād is close to the forest and its climate is unhealthy, but the town is well drained into the Mālin. The principal relic of Rohilla rule is the tomb of Najīb-ud-daula; and a carved gateway still marks the site of the palace, now occupied by the *tahsīlī*. A spacious building called the Mubārak Bunyād, which was built at the close of the eighteenth century, is used as a resthouse. The fortress of Patthargarh, also known as Najafgarh, is in ruins. The stone used in its construction was taken from an ancient fort, called

Mordhaj, some distance away. Najībābād contains a dispensary and police station, and a branch of the American Methodist Mission. It has been administered as a municipality since 1866. During the ten years ending 1901 the income and expenditure averaged Rs. 15,000. In 1903-4 the income was Rs. 25,000, chiefly from octroi (Rs. 20,000); and the expenditure was Rs. 28,000. Najībābād is of considerable importance as a dépôt for trade with the hills. Metal vessels, cloth, blankets, shoes, &c., are made here, and exported to Garhwāl, while there is a through trade in salt, sugar, grain, and timber. The town is also celebrated for its production of sweetmeats and small baskets, and in former days its matchlocks were well-known. The *tahsīlī* school has over 220 pupils and an English school about 100. A primary school and 11 aided schools have about 350 pupils.

Nakodar Tahsīl.—Western *tahsīl* of Jullundur District, Punjab, lying on the north bank of the Sutlej, between 30° 56′ and 31° 15′ N. and 75° 5′ and 75° 37′ E., with an area of 371 square miles. The population in 1901 was 222,412, compared with 217,079 in 1891. The head-quarters are at the town of Nakodar (population, 9,958), and it also contains 311 villages. The land revenue and cesses in 1903-4 amounted to 4·3 lakhs. The Sutlej forms the southern boundary of the *tahsīl*. The alluvial lowlands along the right bank average 7 miles in breadth. The soil of the uplands above the old bank of the river is a light loam, and low sand ridges are not uncommon. The Eastern Bein passes through the *tahsīl*.

Nakodar Town.—Head-quarters of the *tahsīl* of the same name, Jullundur District, Punjab, situated in 31° 8′ N. and 75° 29′ E. Population (1901), 9,958. Taking its name from the Nikūdari wing or legion of the Mughals, it became a stronghold of the Sikh chief, Tārā Singh, Ghaiba, and was captured by Ranjīt Singh in 1815. The cantonment established here after the first Sikh War was abolished in 1854. Nakodar contains two fine tombs dated 1612 and 1637. It has a considerable trade in agricultural produce, and *hukka* tubes and iron jars are manufactured. The municipality was created in 1867. The income during the ten years ending 1902-3 averaged Rs. 9,100, and the expenditure Rs. 8,800. In 1903-4 the income was Rs. 9,300, chiefly from octroi; and the expenditure was Rs. 10,100. The town has an Anglo-vernacular middle school, maintained by the municipality, and a Government dispensary.

Nakūr Tahsīl.—South-western *tahsīl* of Sahāranpur District, United Provinces, lying between 29° 39′ and 30° 10′ N. and 77° 7′ and 77° 34′ E. It comprises four *parganas*—Sultānpur, Sarsāwā, Nakūr, and Gangoh—which all lie on the east bank of the Jumna. The total area is 428 square miles, of which 306 were cultivated in 1903-4. The population rose from 192,657 in 1891 to

203,494 in 1901. There are 394 villages and eight towns, including GANGOH (population, 12,971), AMBAHTĀ (5,751), and NAKŪR (5,030), the head-quarters. In 1903-4 the demand for land revenue was Rs. 3,29,000, and for cesses Rs. 55,000. About one-third of the *tahsīl* lies in the Jumna *khādar*. The eastern portion is irrigated by the Eastern Jumna Canal, which supplied 24 square miles in 1903-4, while 60 square miles were irrigated from wells.

Nakūr Town.—Head-quarters of the *tahsīl* of the same name in Sahāranpur District, United Provinces, situated in 29° 56′ N. and 77° 18′ E. Population (1901), 5,030, Hindus and Musalmāns being about equally divided. Nakūr is said to have been founded by Nakula, one of the Pāndavas, from whom its name is derived. The town suffered much in the Mutiny and was burnt by a party of Gūjars; but a relieving force recovered part of the plunder. There is a fine Jain temple, and also a *tahsīlī* school, a dispensary, and a *sarai*, all well built. Nakūr is administered under Act XX of 1856, and taxation yields about Rs. 1,100 a year. The site is raised and well drained. There is very little trade.

Nal.—A large lake in the Bombay Presidency, about 37 miles south-west of Ahmadābād, lying between 22° 43′ and 22° 50′ N. and 71° 59′ and 72° 6′ E. It was at one time part of an arm of the sea which separated Kāthiāwār from the mainland, and it still covers an area of 49 square miles. Its water, at all times brackish, grows more saline as the dry season advances, till at the close of the hot season it has become nearly salt. The borders of the lake are fringed with reeds and other rank vegetation, affording cover to innumerable wild-fowl of every description. In the bed are many small islands, much used as grazing grounds for cattle during the hot season.

Nāla. — Estate in Khāndesh District, Bombay. *See* MEHWĀS ESTATES.

Nālāgarh (also called Hindūr).—One of the Simla Hill States, Punjab, lying between 30° 54′ and 31° 14′ N. and 76° 39′ and 76° 56′ E., with an area of 256 square miles. Population (1901), 52,551. The country was overrun by the Gurkhas for some years prior to 1815, when they were driven out by the British, and the Rājā was confirmed in possession. The present Rājā is Isri Singh, a Rājput. The revenue is about Rs. 1,30,000, of which Rs. 5,000 is paid as tribute. The principal products are wheat, barley, maize, and poppy.

Nālāpāni.—Village in Dehra Dūn District, United Provinces. *See* KALANGA.

Nalbāri.—Village in the Gauhāti subdivision of Kāmrūp District, Eastern Bengal and Assam, situated in 26° 27′ N. and 91° 26′ E. Population (1901), 1,312. The village contains a market in which

country produce of all sorts is procurable. The public buildings include a dispensary and an English middle school. Nalbāri suffered severely from the earthquake of 1897, which altered the waterways and rendered it impossible for boats to come up the Chaulkhoā from Barpetā in the rains—a route that was formerly open. Efforts are now being made to bring one of the rivers back into its former channel. Most of the trade is in the hands of Mārwāri merchants known as Kayahs. The principal imports are cotton piece-goods, grain and pulse, kerosene and other oils, salt, and bell-metal; the chief exports are rice, mustard, jute, hides, and silk cloths.

Nalchitī.—Town in the head-quarters subdivision of Backergunge District, Eastern Bengal and Assam, situated in 22° 39′ N. and 90° 18′ E., on the river of the same name. Population (1901), 2,240. Nalchitī was formerly an important trading town, exporting betel-nuts direct to Arakan and Pegu, and is still a busy mart on the main steamer route between Barisāl and Calcutta. The chief exports are rice and betel-nuts; and the chief imports are salt, tobacco, oil, and sugar. Nalchitī was constituted a municipality in 1875. The income during the decade ending 1901–2 averaged Rs. 2,270, and the expenditure Rs. 2,100. In 1903–4 the income was Rs. 3,150, mainly derived from a property tax; and the expenditure was Rs. 3,100.

Naldrug District.—Former name of OSMĀNĀBĀD DISTRICT, Hyderābād State.

Naldrug Tāluk.—A *tāluk* formerly in the south of Osmānābād District, Hyderābād State, amalgamated with the Tuljāpur *tāluk* in 1905. The population in 1901, including *jāgirs*, was 56,335, and the area was 370 square miles, while the land revenue was 1·3 lakhs.

Naldrug Village.—Village in the Tuljāpur *tāluk* of Osmānābād District, Hyderābād State, situated in 17° 49′ N. and 76° 29′ E. Population (1901), 4,111. The fort of Naldrug is situated above the ravine of the Bori river, and is one of the best fortified and most picturesque places in the Deccan. Before the Muhammadan invasion in the fourteenth century, it belonged to a local Rājā, probably a vassal of the Chālukyas. It fell to the Bahmani dynasty, who built the stone fortifications. After the division of the Bahmani kingdom in 1482, it was seized by the Adil Shāhis of Bijāpur, and was a bone of contention between them and the Ahmadnagar Sultāns. Alī Adil Shāh in 1558 not only added to the fortifications, but erected a dam across the Bori, which afforded a constant supply of water to the garrison.

Nalgonda District.—District in the Medak Gulshanābād Division, Hyderābād State, lying between 16° 20′ and 17° 47′ N. and 78° 45′ and 79° 55′ E., with an area of 4,143 square miles, including *jāgīrs*[1].

[1] The dimensions relate to the District as it stood up to 1905. The changes made then are described below under Population.

The Hyderābād Districts of Warangal, Karīmnagar, Mahbūbnagar, and Atraf-i-balda bound it on the east, north, and west. On the south it is separated from the Guntūr District of the Madras Presidency by the Kistna river. A range of hills runs through the *tāluks* of Nalgonda and Devarkonda, and enters the Amrābād sub-*tāluk* in the south of Mahbūbnagar District. Another range of low hills starts in the south-west of the District and extends from the vicinity of the Dandi river in a north-eastern direction as far as Warangal District. A third range, known as the Nalla Pahād, after reaching the Dandi and the Peddavāgū, bifurcates, one spur extending north, the other joining the second range. A fourth range, in the north-west of the District, runs from the west of Pāsnūr in a north-westerly direction as far as Surikonda, and then taking a sudden turn towards the east extends for 12 miles and turns again due north, passing between Nārāyanpur and Ibrāhīmpatan, curving again towards Vemalkonda. This range lies almost wholly in the District, its total length being about 60 miles. Besides these there are nearly a hundred isolated hills, some of which are situated in one or other of the ranges mentioned. The general slope of the District is from west and north-west towards the south-east.

Physical aspects.

The most important river is the Kistna, which forms the southern boundary. It first touches the District at Yellaisharam in the Devarkonda *tāluk* and has fifteen fords, one in Devarkonda and fourteen in Devalpalli *tāluk*, served by boats or coracles. Its length in the District is 53 miles. The Mūsi, a tributary of the Kistna, enters the District from the north-west, and flows due east for a distance of 40 miles; but after its junction with the Aler river, it flows in a south-easterly direction till it falls into the Kistna near Wazīrābād, after a course in the District of 95 miles. The other rivers are the Peddavāgū and the Dandi in the Devarkonda *tāluk*. The Hallia river, which rises in the hills west of Nārāyanpur in the Nalgonda *tāluk*, flows in a south-easterly direction for about 45 miles, when it is joined by the Kongal river near the village of Kongal, and continuing in the same direction falls into the Kistna. Its total length is 82 miles.

The District is occupied by Archaean gneiss, except along the banks of the Kistna, where the rocks belong to Cuddapah and Kurnool series[1]. The famous Golconda diamonds were formerly obtained from the Cuddapahs and Kurnools, particularly the basement beds of the latter.

The jungles and hilly portions of the District contain the common trees met with everywhere, such as teak, ebony, *eppa* (*Hardwickia binata*), *nallāmaddi* (*Terminalia tomentosa*), *sandra* (*Acacia Catechu*),

[1] W. King, *Memoirs, Geological Survey of India*, vol. viii, pt. i.

babūl (*Acacia arabica*), mango, tamarind, *tarvar* (*Cassia auriculata*), and various species of *Ficus*.

In the jungly portions of Devarkonda and Devalpalli and parts of Bhongīr and Suriapet, tigers, leopards, cheetahs, bears, hyenas, and wolves, as well as *sāmbar*, spotted deer, antelope, and hares, are found. Among birds, peafowl, partridges, quail, rock pigeon, and jungle-fowl are abundant.

The District is malarious from August to October, and healthy from November to the end of May. It is very hot during April and May, the temperature rising to 110°. In August and September the moist heat is very oppressive. The average rainfall for the twenty-one years ending 1901 was 26 inches.

History.

The District was part of the dominions of the WARANGAL Rājās, one of whose governors built Pāngal, 2 miles north-east of the town of Nalgonda, and made it his head-quarters, afterwards removing to Nalgonda. That place was conquered during the reign of Ahmad Shāh Wali, the Bahmani king. After the dissolution of the Bahmani power, the District became part of the Kutb Shāhi kingdom of GOLCONDA, and though it had been occupied for a time by the Rājā of Warangal, it was eventually retaken by Sultān Kuli Kutb Shāh. After the fall of Golconda, the District was annexed with the other Deccan *Sūbahs* by Aurangzeb, but it was separated from the Delhi empire on the foundation of the Hyderābād State in the beginning of the eighteenth century.

There are several places of archaeological interest in the District, the chief among them being the forts of NALGONDA, Devarkonda, Orlakonda in the Suriapet *tāluk*, and BHONGĪR. The fort of Devarkonda is surrounded by seven hills, and was at one time considered a formidable stronghold, but is now in ruins. The temples at Pāngal in the Nalgonda *tāluk*, at Nāgalpād in Devalpalli, and at Pālalmari in Suriapet, are fine specimens of Hindu religious architecture.

Population.

The number of towns and villages in the District, including *jāgīrs*, is 974. The population at the three enumerations was: (1881) 494,190, (1891) 624,617, and (1901) 699,799. The towns are NALGONDA and BHONGĪR. About 95 per cent. of the population are Hindus, and as many as 91 per cent. speak Telugu. The table on the next page shows the distribution of population in 1901.

In 1905 Cherial and Kodār were transferred to this District from Warangal, the latter sub-*tāluk* being made a *tāluk* and its name changed to Pochamcherla. The District in its present form thus consists of the following seven *tāluks*: Nalgonda, Cherial, Suriapet, Pochamcherla, Mirialguda (Devalpalli), Devarkonda, and Bhongīr.

The most numerous caste is that of the agricultural Kāpus, who

number 125,500, or 18 per cent. of the population, the most important classes among them being the Kunbīs (82,800) and Mutrāsis (33,100). Next come the Mādigas or leather-workers (95,500), the Dhangars or shepherds (71,700), the Mahārs or village menials (57,200), the Brāhmans (31,400), the Sālas or weavers (28,900), the Komatis or trading caste (26,600), and the Ausalas or smiths (22,300). The Mādigas and Mahārs work as agricultural labourers, and most of the Dhangars are engaged in agriculture as well as grazing. The population engaged in, and supported by, agriculture numbers more than 250,000, or 36 per cent. of the total.

Tāluk.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Nalgonda	762	1	190	131,836	173	− 5·1	Not available.
Suriapet	644	...	182	166,586	258	+ 18·4	
Devalpalli	749	...	150	76,904	103	− 9·9	
Devarkonda	662	...	152	85,370	129	+ 16·8	
Bhongīr	454	1	92	73,031	161	+ 34·6	
Jāgīrs, &c.	872	...	206	166,052	190	+ 10·9	
District total	4,143	2	972	699,779	168	+ 12·0	13,038

There is an American mission at Nalgonda, having a church, a mission school, and a hospital, with a competent staff of native Christian teachers for the school, and a lady doctor in charge of the hospital. The mission has two branches, one at Devarkonda and the other at Mirialguda. In 1901 the District contained 1,212 native Christians, of whom 429 were Roman Catholics, 225 Methodists, and 235 Baptists. The converts are mostly from the lower castes.

Agriculture.

The entire District is situated in the granitic region, hence most of its soils are derived from the decomposition of granite and are generally sandy, such as *chalka* and *masab*. In the Devalpalli *tāluk* the soil near the Kistna is alluvial, and also consists to a large extent of *regar* or black cotton soil. Both these varieties are utilized for raising *rabi* crops. *Regar* is found in the other *tāluks* to a smaller extent, but with an admixture of sand. The *kharīf* crops raised on the *chalka* and *masab* soils are *jowār*, *bājra*, cotton, *kulthi*, and castor-oil seed.

The tenure of lands is mainly *ryotwāri*. *Khālsa* and 'crown' lands covered a total area of 3,271 square miles in 1901, of which 1,525 were cultivated, 874 cultivable waste and fallows, 574 forests, and 298 were not available for cultivation. *Jowār* and *bājra* form the staple food-crops, being grown on 17 and 22 per cent. of the net area cropped. Rice is next in importance, the area under it being 138

square miles. Cotton is produced on $11\frac{1}{2}$ square miles, and castor-oil seed on 386 square miles.

The District has not yet been settled, but the revenue survey has been completed. The total cultivated area increased from 1,187 square miles in 1891 to 1,525 in 1901, or by 41 per cent. No steps have been taken to improve the cultivation by importing new varieties of seed or introducing better agricultural implements.

A special breed of cattle is found in the Devarkonda *tāluk*, generally black or red in colour, very sturdy and well suited for agricultural work. The animals are supposed to be descended from the Mysore breed, and are well-known beyond the frontier, a large number being acquired by purchasers from British territory. The white cattle bred in the Suriapet and Devalpalli *tāluks* are handsome animals. In other parts the cattle are of the ordinary strain. Goats are largely bred in the Devarkonda, Devalpalli, and Suriapet *tāluks*, as the large extent of jungle and hill tracts provides plenty of grazing, while in the Nalgonda and Bhongīr *tāluks* sheep are more commonly kept. The ponies are of a very inferior class.

The area irrigated in 1901 was 229 square miles, supplied by 352 large tanks, 1,110 *kuntas* or small tanks, 12,456 wells, and 208 other sources. The principal channels are those from the rivers Mūsi, Aler, Peddavāgū, and other minor streams, which supply some of the chief tanks, as well as provide direct irrigation.

There are small forest areas in all the *tāluks*, amounting to a total of 574 square miles, of which 190 square miles are 'protected.' In the hilly jungles bordering on the Kistna river in the Devalpalli and Devarkonda *tāluks*, large tracts are covered with *eppa* (*Hardwickia binata*) and *sandra* (*Acacia Catechu*). No forest is 'reserved,' but 17 species of timber trees have been reserved wherever found. The revenue obtained from the sale of fuel, charcoal, and forest produce in 1901 was Rs. 2,750.

In the Devalpalli *tāluk* laminated limestone resembling the Shāhābād stone is found, which is used for building purposes and also burnt for making lime. Slate is also found in the same *tāluk*. Gold was discovered at Chitrial in the same *tāluk*, and worked for a time, but the yield was so small that the mine was given up. At Nandkonda and the neighbouring villages on the left bank of the Kistna diamonds are said to be found.

Trade and communications.

At Charlapalli and Pāngal in the Nalgonda *tāluk* silk cloth scarves and *sārīs* of various patterns and colours are made, which are very durable and are largely used by the better classes. The Sālas or weavers also manufacture ordinary coarse cotton cloth and *sārīs* for the use of the ryots. Light earthen vessels, such as goblets and drinking cups of

a fine quality, are made at Bhongīr, and are exported to Hyderābād and adjoining Districts. To the east of the town of Nalgonda there is a tannery where leather of a superior quality is prepared. The number of hands employed in 1901 was 30.

The chief exports consist of castor-seed, cotton, *tarvar* bark, hides and skins, both raw and prepared, bones and horns, rice, *jowār*, and *bājra*; while the imports are salt, opium, silver and gold, copper and brass, iron, refined sugar, kerosene oil, raw silk, yarn, and silken, woollen, and cotton fabrics. The chief centres of trade are the towns of Nalgonda and Bhongīr. Articles for export from the northern portions of the District find their way to Bhongīr and Aler stations on the Nizām's Guaranteed State Railway, and those from the southern portions are sent direct by the old Masulipatam road to Hyderābād. The number of carts that pass through the town of Nalgonda varies between 200 per diem in the slack season to 700 in busy times.

The Nizām's Guaranteed State Railway traverses the Bhongīr *tāluk* from west-south-west to east-north-east for a distance of 21 miles, and has five stations in the District.

The principal road is that from Hyderābād to Masulipatam, which was constructed by the Madras Sappers and Miners in 1832 for military purposes. Its length in the District as far as Gumpal in the Suriapet *tāluk* is 71 miles. The road from Hyderābād to Madras branches off at the sixty-seventh mile, near Nakrekal, and terminates at Wazīrābād near the Kistna, its length in the District being 40 miles. This road was also made about the same time as the former, and by the same agency. About 21 miles of the Hyderābād-Warangal road lie in the District. Other roads are railway feeders, such as the Nalgonda-Bhongīr road, 44 miles; the Khammamett station feeder road, 18 miles; Nalgonda to Devarkonda, 36 miles; to Tipparti, 12 miles; and to Nakrekal, 14 miles. The last three were made during the famine of 1877–8.

Famine.

In 1790 a great famine affected the District, and grain was sold at one rupee a seer. Another famine in 1877 caused severe distress among the poor. Grain was sold at 4 seers a rupee, and the District lost more than 34,000 head of cattle. The famine of 1899–1900 was not so severe as that of 1877, but its effects lasted for nearly two years.

Administration.

The District is divided into three subdivisions: one consisting of the *tāluks* of Bhongīr and Cherial, under a Second Tālukdār; the second consisting of the *tāluks* of Mirialguda (Devalpalli) and Devarkonda, under a Third Tālukdār; and the third consisting of the *tāluks* of Nalgonda, Suriapet, and Pochamcherla (Kodār), under the head-quarters Third

Tālukdār. The First Tālukdār exercises a general supervision over the work of all his subordinates. Each *tāluk* is under a *tahsīldār*.

The District civil court is presided over by the First Tālukdār with a *Madadgār* or Judicial Assistant for both civil and criminal work, there being no *Nāzim-i-Dīwāni*. There are altogether ten subordinate civil courts, three presided over by the Second and Third Tālukdārs, and seven by the *tahsīldārs*. The First Tālukdār is the chief magistrate of the District and his Assistant is also a joint-magistrate, who exercises powers in the absence of the First Tālukdār from headquarters. The Second and Third Tālukdārs and the *tahsīldārs* have magisterial powers of the second and third class. Serious crime is not heavy, dacoities, theft, and house-breaking being the common offences in ordinary years.

Little is known of the early history of land revenue. Up to 1821 an *anchanadār* (estimator) was appointed to every ten villages, who estimated the standing crops and submitted his estimates to the *āmils*. On 'wet' lands irrigated by tanks, and 'dry' lands, the State and the ryot had equal shares, but on 'wet' lands supplied by channels and wells the ryot's share was three-fifths and three-fourths respectively. In 1821 *ziladārs* (revenue managers) were appointed, who entered into an agreement for a period of ten years with *patels* or village headmen to pay annually a sum equal to the average receipts of the previous ten years. In 1835 groups of villages were made over to *zamīndārs* on the *sarbasta* or contract system, which continued to the time of Messrs. Dighton and Azam Alī Khān, the revenue managers or *ziladārs* in 1840. Five years later this was changed in certain *tāluks* and the revenue was collected departmentally, partly in kind and partly in cash. The *sarbasta* or contract system was completely abolished on the formation of regular Districts in 1866, when rates of assessment were fixed per *bīgha* ($\frac{3}{4}$ acre). The revenue survey of the whole District has not yet been completed. The *tāluks* of Nalgonda and Devalpalli have very recently been settled, the increase in their revenue being nearly Rs. 46,200, or more than 16 per cent. The average assessment on 'dry' land is Rs. 1–14 (maximum Rs. 2–12, minimum Rs. 1–4), and on 'wet' land Rs. 15 (maximum Rs. 18, minimum Rs. 11).

The land revenue and total revenue in recent years are given below, in thousands of rupees:—

	1881.	1891.	1901.	1903.
Land revenue . . .	8,20	10,93	11,97	12,38
Total revenue . . .	12,99	16,83	22,49	22,22

Owing to changes in area effected in 1905, the revenue demand is now about 14·6 lakhs.

In 1902, after the settlement of the two *tāluks* of Nalgonda and Devalpalli, a cess of one anna in the rupee was levied for local purposes, and boards were formed for every *tāluk* except Nalgonda, with the *tahsīldārs* as chairmen. A District board was also constituted, with the First Tālukdār as president. Prior to the formation of these boards and the levying of the one anna cess, the municipal expenditure of the town of Nalgonda and of all the head-quarters of *tāluks* was met from State funds, amounting to Rs. 2,844 in 1901. The District board supervises the work of the municipality of Nalgonda.

The First Tālukdār is the head of the police, with a Superintendent (*Mohtamim*) as his executive deputy. Under him are 6 inspectors, 92 subordinate officers, 589 constables, and 25 mounted police. These are distributed among 39 *thānas* or police stations and 39 outposts. The rural police number 666, besides 1,098 *setsindīs* or village watchmen. Short-term prisoners are kept in the District jail at Nalgonda, those with terms exceeding six months being sent to the Central jail at Warangal. Since the recent changes, they have been transferred to the Central jail at Nizāmābād.

The District occupies a low position as regards the literacy of its population, of whom only 1·9 per cent. (3·2 males and 0·3 females) were able to read and write in 1901. The total number of pupils under instruction in 1881, 1891, 1901, and 1903 was 242, 1,097, 1,316, and 1,472 respectively. In 1903 there were 29 primary and 2 middle schools, with 84 girls under instruction. The total expenditure in 1901 was Rs. 8,800, all of which was paid by the State. Of this, Rs. 8,336 was spent on State schools and Rs. 468 granted to the aided schools. The fee receipts for the State schools amounted to Rs. 603, and of the aided schools to Rs. 430.

There were 3 dispensaries in the District in 1901, with accommodation for 12 in-patients. The total number of out-patients treated was 24,739 and of in-patients 157, and 551 operations were performed. The expenditure amounted to Rs. 10,074. The number of persons successfully vaccinated was 1,811, or 2·6 per 1,000 of the population.

Nalgonda Tāluk.—*Tāluk* in Nalgonda District, Hyderābād State, with an area of 874 square miles. Including *jāgīrs*, the population in 1901 was 151,133, compared with 159,225 in 1891, the decrease being due to transfer of certain villages. The *tāluk* contains one town, NALGONDA (population, 5,889), the District and *tāluk* head-quarters; and 216 villages, of which 26 are *jāgīr*. The land revenue in 1901 was 3·5 lakhs. The soils are sandy, and irrigation by tanks and channels is extensively resorted to for rice cultivation.

Nalgonda Town.—Head-quarters of the District and *tāluk* of the same name, Hyderābād State, situated in 17° 3′ N. and 79° 16′ E.,

between two hills. Population (1901), 5,889. On the northern hill stands Shāh Latīf's tomb, and on the southern is a strong fortress surrounded with masonry wall. The town was formerly named Nīlgiri by its Rājput rulers, but its present name was given after its conquest by Alā-ud-dīn Bahman Shāh. Nalgonda contains a spacious *sarai* built by Mīr Alam, a Hindu temple, a travellers' bungalow, and a busy market called Osmānganj, the usual offices, a post office, a dispensary, a District jail, a middle school with 256 boys, and a girls' school. A British post office is situated in Nakrekal, 12 miles from Nalgonda. There is also a tannery, 2 miles distant from the town.

Nalhāti.—Village in the Rāmpur Hāt subdivision of Bīrbhūm District, Bengal, situated in 24° 18′ N. and 87° 50′ E., on the East Indian Railway, 145 miles from Calcutta. Population (1901), 2,636. Nalhāti is said to have been the capital of a traditional Hindu monarch, Rājā Nala, and traces of the ruins of his palace are pointed out on a hillock called Nalhāti Zila, close to the village. Another legend connects the name with a temple to Nalateswarī, and it is here that the *nala* or throat of the goddess Satī is said to have fallen. The Azīmganj branch of the East Indian Railway joins the loop-line at Nalhāti, and it is an important centre of the rice trade.

Nalia.—Petty State in REWĀ KĀNTHA, Bombay.

Nalitābāri.—Village in the Jamālpur subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 25° 5′ N. and 90° 13′ E., about 13 miles north-east of Sherpur. Population (1901), 620. It is one of the most important marts in the north of the District, and a large quantity of cotton produced in the Gāro Hills is brought to market here, as well as all kinds of country produce.

Naliya.—Town in the State of Cutch, Bombay, situated in 23° 18′ N. and 68° 54′ E. Population (1901), 6,080. This is one of the most thriving towns in Cutch. It is walled and well built, and has a class of prosperous traders, being the residence of retired merchants who have made their fortunes in Bombay or Zanzibar. It contains a dispensary.

Nallamalais ('Black Hills').—The name locally given to a section of the EASTERN GHĀTS which lies chiefly in the three westernmost *tāluks* of Kurnool District, Madras, between 14° 26′ and 16° 0′ N. and 78° 39′ and 79° 23′ E. The range runs nearly north and south for 90 miles from the Kistna river (which flows among its northernmost spurs in a deep and wildly picturesque channel) to the Penner in Cuddapah District, and averages from 1,500 to 2,000 feet in elevation. The highest points in it are Bhairani Konda (3,048 feet), just north-west of Cumbum, and Gundla Brahmeswara (2,964 feet), due west of that place. Down the slopes of the latter runs a torrent,

which ends in a beautiful waterfall descending into a sacred pool called Nemaligundam ('peacock pool'). Many other peaks of the range are between 2,000 and 3,000 feet above the sea. Geologically, the rocks of which it is composed belong to what is known as the Cuddapah system, a series some 20,000 feet in thickness. They consist of quartzites (and some sandstone), overlaid with slaty formations which are unfortunately too irregular in cleavage and soft in texture to be of economic value. The exact stratigraphy of these rocks was little understood for many years, owing to the difficulty of geological research in a country which was for the most part overgrown with forest and ill supplied with roads, but Dr. King of the Geological Survey eventually unravelled the tangle. A striking feature of the system is the foldings into which the rocks were forced by a period of great strain and stress acting from the east. In some places immense thicknesses have been thrust over westward and completely inverted.

The Nallamalais contain several plateaux, and more than one attempt has been made by Europeans to settle upon them; but, though they are healthy for much of the year, the great scarcity of water and the prevalence of fever after the rains in June will probably always render them undesirable places of residence. The low plateau of SRĪSAILAM was inhabited in the days of old, and the remains of ancient towns, forts, temples, reservoirs, and wells testify to the prosperity of the residents. At present the only people who live upon the range are the forest tribe of the Chenchus, who dwell in small clusters of huts dotted about it. They used to subsist largely on fees paid them by the adjoining villagers for guarding the footpaths and tracks across the hills. After the present police force was organized these fees were less regularly paid; and the tribe now lives by breeding cattle and sheep, collecting honey and other products of the jungle, or serving as watchmen in the forest.

Practically the whole range is covered with unbroken forest, but except in places on the western slopes, where there is some sandstone, little of this is really dense or large. The annual rainfall is usually less than 40 inches, and the rocks are so deeply fissured that much of it runs away as soon as it falls. There is thus too little moisture for the growth of large trees. The characteristic of the timber on the range is its hardness. *Terminalia*, *Hardwickia*, *Pterocarpus*, and *Anogeissus* are the commonest species. Teak has been planted but did not flourish. Now that the railway from Guntakal to Bezwāda crosses the range, great quantities of timber, firewood, and bamboos are carried by it to the neighbouring Districts.

The railway runs along the pass known as the Nandikanama, or 'bull pass,' which is so called from a temple to Siva's bull Nandi

built near a thermal spring not far from its western extremity. It is a considerable engineering work, several long tunnels and high viaducts being necessary. It follows the line taken by the chief of the two cart-roads over the range, the route connecting Kurnool District with the coast, which is 18 miles in length and rises to about 2,000 feet above the sea. The other road, which goes by way of the Mantralamma or Dormal pass farther north, is much less important.

Naltigiri.—Spur of the Assia range in the head-quarters subdivision of Cuttack District, Bengal, situated in 20° 35′ N. and 86° 15′ E., on the south of the Birūpā river. The hill has two peaks of unequal height, with a pass between. It is famous for its Buddhist remains, some of which are in a fair state of preservation.

Nāmakkal Subdivision.—Subdivision of Salem District, Madras, consisting of the NĀMAKKAL and TIRUCHENGODU *tāluks*.

Nāmakkal Tāluk.—*Tāluk* in Salem District, Madras, lying between 11° 1′ and 11° 25′ N. and 77° 51′ and 78° 30′ E., with an area of 715 square miles. It is the most southerly *tāluk* of the District and lies lower than the others, forming a wide plain broken on the north and east by the great range of the KOLLAIMALAIS. The Cauvery skirts it and encircles a small tract of country, which, with its flourishing groves of plantains, betel-vines, and coco-nut palms, its sugar-cane and green expanses of rice, rivals in richness the delta of Tanjore. The population in 1901 was 313,895, compared with 300,047 in 1891. There are 356 villages and two towns, NĀMAKKAL (population, 6,843) and SENDAMANGALAM (13,584). The demand for land revenue and cesses in 1903-4 was Rs. 4,47,000.

Nāmakkal Town.—Head-quarters of the subdivision and *tāluk* of the same name in Salem District, Madras, situated in 11° 14′ N. and 78° 10′ E., on the Salem-Trichinopoly road, 31 miles from Salem city, and 20 miles from the nearest railway station, Karūr on the South Indian Railway. Population (1901), 6,843. The town is famous for its temple of Nāmagiri Amman built at the base of the Nāmakkal rock—a great rounded mass of gneiss about 200 feet high, crowned by a hill fort visible for miles round, and easily distinguished from the surrounding hills by its white colour. The battlements are still in perfect preservation, being made of well-cut blocks of the same stone as the hill itself, and secured to the rock by mortar. No mortar has been used in the higher courses, which hold together solely by their own weight and accurate fitting. Besides the fort, a Hindu temple and a Muhammadan flagstaff stand on the top of the rock. The building of the fortress is ascribed by some to Rāmachandra Naik, *poligār* of Sendamangalam, and by others to Lakshminarasayya, an officer under the Mysore Rājā. It is perhaps less than 200 years old, and was captured by the English in 1768, only to be lost again

to Haidar Alī a few months later. At the foot of the rock on the other side lie the drinking-water tank called the Kamalālayam, and a public garden. The town possesses a high school, the only Local fund institution of that class in the District. *Ghī* of an excellent quality is brought to the Nāmakkal market and exported to distant places.

Namhkai (Burmese, *Nanke*).—Petty State in the Myelat division of the Southern Shan States, Burma, lying between 20° 10′ and 20° 20′ N. and 96° 33′ and 96° 54′ E., with an area of 75 square miles. It is bounded on the north by Loi-ai, the Hsihkip dependency of Yawnghwe, and Loimaw; on the east by Yawnghwe; and on the south and west by Loilong. The greater part of the State consists of grassy downs, but to the west, towards Loilong, it breaks up into hilly country. The population in 1901 was 6,780, distributed in 76 villages, nearly the whole being Taungthus. The Ngwegunhmu, who resides at Paw-in (population, 259), is himself a Taungthu. The revenue in 1904-5 amounted to Rs. 5,000, and the tribute to the British Government is Rs. 3,000.

Namhkok (Burmese, *Nankok*).—State in the central division of the Southern Shan States, Burma, lying between 20° 33′ and 20° 47′ N. and 97° 11′ and 97° 21′ E., with an area of 106 square miles. It is bounded on the north by Hopong; on the east by Möngpawn; on the south by Nawngwawn; and on the west by Yawnghwe, from which it is separated by the Tamhpak river. From the Tamhpak valley the ground rises to a considerable height in the east on the Möngpawn border. Rice is grown both on the low-lying lands and in *taungyas* on the hill-slopes. Other crops are vegetables of various kinds, indigo, and *thanatpet*. The population of the State in 1901 was 6,687, distributed in 78 villages. Shans and Taungthus are represented in about equal proportions. The Myoza's head-quarters are at Namhkok (population, 383), in the valley of one of the eastern tributaries of the Nam Tamhpak. The revenue in 1903-4 amounted to Rs. 8,800 (mainly *thathameda*); and the chief items of expenditure were Rs. 4,500 tribute to the British Government, Rs. 2,400 spent on officials' salaries, &c., and Rs. 1,100 credited to the privy purse.

Nam Mao.—River of Upper Burma. *See* SHWELI.

Nammekon.—One of the KARENNI States, Burma.

Namtok (Burmese, *Nantok*).—A very small State in the Myelat division of the Southern Shan States, Burma, lying in 20° N. and 97° E., in the Nam Pilu valley, enclosed between Samka, Loilong, and Sakoi, with an area of 20 square miles. The population in 1901 was 778 (in 12 villages), all Shan-speaking. The only village of any size is Namtok (population, 235), the residence of the Ngwegunhmu, lying on the Pilu. The revenue in 1904-5 amounted to Rs. 1,000, and the tribute to the British Government is Rs. 500.

Nam Tu.—River in the Northern Shan States, Burma. *See* MYITNGE.

Nancowry Harbour.—The best harbour in the Nicobar Islands. *See* NICOBARS.

Nandā Devī.—The highest mountain in British India, situated in 30° 23′ N. and 79° 58′ E., in the District and *tahsīl* of Almorā, United Provinces. The elevation above sea-level is 25,661 feet. The peak is a pyramid of grey rock coated with ice, and its sides rise at an angle of about 70° above the surrounding snow-clad mountains. The Hindus regard the clouds of snow blown off the summit by the wind as smoke from the kitchen of the goddess Nandā.

Nandana.—Place of historical interest in the Pind Dādan Khān *tahsīl* of Jhelum District, Punjab, situated in 32° 43′ N. and 73° 17′ E., 14 miles west of Choa Saidān Shāh, in a remarkable dip in the outer Salt Range. Near by are extensive remains of a temple, a fort, and a large village. The temple is in the Kashmīrī style, but faces west, instead of east, as temples of that style usually do. Of the fort, two bastions of large well-cut sandstone blocks still remain. Nandana is mentioned as the objective of one of Mahmūd of Ghazni's expeditions in 1014. Early in the thirteenth century it was held by Kamr-ud-dīn Karmāni, who was dispossessed by a general of Jalāl-ud-dīn, Sultān of Khwārizm. The latter was defeated on the Indus in 1221 by Chingiz Khān, one of whose officers, Turti, the Mongol, took Nandana and put its inhabitants to the sword. It appears in the list of places conquered by Altamsh, who entrusted it to one of his nobles. In 1247 his son Mahmūd Shāh dispatched an army to ravage the hills of Jūd and the country round Nandana, to punish a Rāna who had guided a Mongol inroad in the previous year.

Nāndasa.—Petty State in MAHĪ KĀNTHA, Bombay.

Nānder District.—District in the Aurangābād Division, in the north of the State of Hyderābād, lying between 18° 28′ and 19° 31′ N. and 77° 4′ and 78° 6′ E., with an area of 3,349 square miles[1]. It is separated from the Berār District of Bāsim by the Pengangā, and is bounded on the east by Nizāmābād, on the south by Bidar, and on the north and west by Parbhani. A range of hills, known as the Bhāg or Thānāvari, runs through the District from north-west to south-east between Parbhani and Nizāmābād. There are minor ranges in the Nānder, Kandahār, Osmānnagar, and Bhaisa *tāluks*.

Physical aspects.

The most important river is the Godāvari, which enters from the west, and, flowing past Nānder in the centre of the District in an easterly direction, passes out into Nizāmābād. The Mānjra, its largest tributary, joins the Godāvari on the right at Mānjra Sangam (confluence),

[1] These limits relate to the area of the District before the changes made in 1905; see paragraph on Population.

5 miles east of Kondalwādi. The Pengangā forms the northern boundary of the District, flowing in an easterly direction. Other rivers are the Ashna, a tributary of the Godāvari, flowing east and falling into it on the left bank, about 2 miles from Nānder town; the Siddha in the Nānder and Bhaisa *tāluks*, also a tributary of the Godāvari; the Lendi in Deglūr, and the Manār in Deglūr and Kandahār.

The geological formations are the Archaean gneiss and the Deccan trap, occupying respectively the east and west of the District.

The District contains teak, *mahuā* (*Bassia latifolia*), *khair* (*Acacia Catechu*), tamarind, mango, *eppa* (*Hardwickia binata*), *nīm*, and various species of *Ficus*.

The only *tāluk* in which any large game is regularly found is Hadgaon, where tigers, leopards, bears, wild dogs, hyenas, hog, wolves, *sāmbar*, barking-deer, and spotted deer are met with; also partridges, quail, peafowl, green pigeons, and duck.

With the exception of the Biloli *tāluk*, which is comparatively damp, the District is dry and healthy. In Nānder and Kandahār the temperature in May rises to 112°, while Hadgaon, Osmānnagar, and Deglūr are cooler, the temperature being about 100° in May. In December it falls to 60°. The average rainfall for twenty-one years, 1881–1901, was 36 inches.

History.

The District formed part of the Chālukyan and Yādava kingdoms, and Nānder is supposed to be the old Nanagiri fort of the early Kākatīyas. In the beginning of the fourteenth century it was conquered by Alā-ud-dīn Khiljī. It formed part of the Bahmani and subsequently of the Kutb Shāhi kingdom. The tract was annexed to the Mughal empire after the conquest of the Deccan by Aurangzeb, but was separated from it on the foundation of the Hyderābād State in the beginning of the eighteenth century.

There are several tombs of Musalmān saints at Kandahār and Nānder, and the fort at the latter place is old. Nānder also contains the *Gurūdwāra* of the Deccan Sikhs, where Gurū Govind is buried. Two old mosques at Nānder were built, one by Malik Ambar and the other during the reign of the Kutb Shāhis. The fort of Kandahār is popularly supposed to have been erected in the fourth century by Somadeva, a Rājā of Kandahār; and it may perhaps be connected with Krishna III, the Rāshtrakūta of Malkhed, who is styled lord of Kandhārapura. It is surrounded by a ditch and a strong stone wall. DEGLŪR contains an old temple of Ganda Mahārāj, and BHAISA another built after the Hemādpanti style.

The number of towns and villages in the District is 1,174, including *paigāh* and *jāgīrs*. Its population at the last three enumerations was:

(1881) 636,023, (1891) 632,522, and (1901) 503,684. The famine of 1899–1900 accounts for the decrease of population in the last decade. The towns are NĀNDER, BHAISA, DEGLŪR, and MUKKHER. Nānder is the head-quarters of the District. About 89 per cent. of the population are Hindus and 10 per cent. Musalmāns. More than 70 per cent. speak Marāthī and 14 per cent. Telugu. The following table shows the distribution of population in 1901:—

Population.

Tāluk.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Osmānnagar	258	...	86	30,577	118	− 22.1	Not available.
Hadgaon	419	...	141	43,602	104	− 41.8	
Bhaisa	217	1	77	39,100	180	− 18.3	
Biloli	198	...	85	33,870	171	− 2.3	
Deglūr	267	1	103	49,324	238	− 2.5	
Kandahār	553	1	153	78,546	142	− 24.0	
Nānder	632	1	250	92,479	146	− 22.2	
Jāgīrs, &c.	805	...	275	136,186	162	− 19.0	
District total	3,349	4	1,170	503,684	150	− 20.4	11,001

In 1905 the Mudhol *tāluk*, and a few villages from Bānswāda, were transferred from Nizāmābād to this District, while Bhaisa was absorbed in Mudhol, and Osmānnagar was divided between Biloli and Kandahār. The northern villages of the Nānder *tāluk* were made over to Kalamnūri in Parbhani District, and other portions were added to Hadgaon and Mudhol. The District in its present form thus comprises six *tāluks*—Hadgaon, Mudhol, Biloli, Deglūr, Kandahār, and Nānder—besides a large *paigāh* estate and a *jāgīr*.

The purely agricultural castes number 171,600, or about 34 per cent., the most important among them being Marāthā Kunbīs or Kāpus (129,700) and Kolīs (15,500). Next come the trading castes, numbering 48,600, of whom 34,900 are Vānīs and 11,600 Komatis. Lower castes include Dhangars or shepherds (45,000), Mahārs or village menials (36,700), and Māngs or leather-workers (33,000). The last two castes work as field-labourers also. There are only 10,200 Brāhmans in the District. More than 65 per cent. of the population are dependent on the land. The District contained only 9 Christians in 1901, of whom one was a native.

Agriculture.

With the exception of the soils of the Kandahār *tāluk*, the entire District is composed of black cotton soil or *regar*. Portions of the Kandahār, Nānder, and Bhaisa *tāluks* are slightly hilly, but other parts are flat, with very gentle undulations. *Rabi* crops are extensively raised, consisting of *jowār*, gram,

peas, wheat, and oilseeds; while the *kharīf* crops include yellow and Berār *jowār*, *bājra*, linseed, cotton, maize, and other food-grains.

The tenure is mainly *ryotwāri*. In 1901 *khālsa* lands measured 2,544 square miles, of which 1,967 were cultivated, 202 were occupied by cultivable waste and fallows, 310 by forests, and 65 were not available for cultivation. The staple food-crop is *jowār*, grown on 52 per cent. of the net area cropped. Next in importance is cotton (449 square miles); the other food-grains, such as *bājra*, *tuar*, and pulses, cover 190 square miles, oilseeds 99, and wheat 82 square miles.

Although no special breed of cattle is found, those reared in the District are sturdy and well suited for ploughing the heavy *regar*. Sheep of the ordinary kind are bred. The milch goats are of a good type, and fetch as much as Rs. 8 per head. Before the closing of the Malegaon horse and cattle fair in Bīdar District, owing to plague (1896), *pātels*, *pātwāris*, and well-to-do ryots used to rear numbers of ponies. The State has provided Arab stallions in all the *tāluks* for the improvement of the breed of horses.

The principal source of irrigation is wells, which number 5,764. In addition, 169 tanks, large and small, and 163 other sources, such as anicuts and channels, are used. All these are in good working order, and irrigate 46 square miles.

The forest area is very limited, only 110 square miles being 'reserved,' and 200 square miles unprotected. The forests contain teak (*Tectona grandis*), *mahuā* (*Bassia latifolia*), ebony (*Diospyros melanoxylon*), *khair* (*Acacia Catechu*), *eppa* (*Hardwickia binata*), and tamarind. Bhaisa, Hadgaon, and Nānder are the only *tāluks* in which any forest areas exist.

Good basalt and granite are found in the vicinity of Nānder, and limestone in the Deglūr, Bhaisa, and Kandahār *tāluks*.

Trade and communications.

Nānder town is famous for its fine muslins, which compare with those of Dacca. The muslin, though produced in small quantities now, is exported. It is much prized at Hyderābād, fetching high prices, especially the kind used for turbans, and the handkerchiefs and *sārīs* adorned with gold and silver thread like Benares work. Ordinary cotton cloth is also woven and is used by the poorer classes. In the Deglūr and Bhaisa *tāluks* coarse cloth is printed for screens and table-cloths. There is a small factory at Nānder for gold and silver thread. Coarse paper is made in Mujāhidpet, and copper and brass vessels are turned out at Mukkher. There were three cotton-presses and three ginning factories in the District in 1901, employing 450 hands. An impetus has been given to this industry since the opening of the Hyderābād-Godāvari Valley Railway in 1900, and four more factories are in course of construction.

The chief exports consist of cotton, linseed, oils, *ghī*, *jowār*, cloth

and muslin, indigo, and food-grains. The principal imports are cotton and woollen goods, raw silk, silver and gold, rice, refined sugar, kerosene oil, opium, copper and brass sheets and vessels. The greater portion of the trade is with the adjoining Districts; but cotton, linseed, and indigo are sent to Bombay, and *ghi*, oils, and grain to Hyderābād. Internal trade is mostly in the hands of the Vānis, Komatis, and Momins, but Bhātias and Kachchis from Bombay are engaged in export trade. The opening of the Hyderābād-Godāvari Valley Railway in 1900 has diverted the chief channels of trade, which formerly passed through Hyderābād and Akola.

The Hyderābād-Godāvari Valley Railway traverses the District from east to west for 40 miles, with six stations.

The District contains 141 miles of fair-weather roads. One starts from Nānder, and passing through Osmānnagar and Kandahār reaches Deglūr (50 miles). The others are from Deglūr to Bīdar (12 miles), Nānder to Hingoli (12 miles), to Mālakoli (25 miles), to Deglūr (12 miles), and to Nirmal (30 miles). On the Godāvari and Mānjra, large coracles and rafts are kept to transport people from one bank to the other.

Famine.

No reliable records exist of early famines. In 1819 a great scarcity is said to have occurred in this and the neighbouring districts, known as *Gājarkāl*. In 1897 there was scarcity, and people had not recovered from its effects when the great famine of 1899-1900 occurred. All the wells and streams dried up, and there was not a drop of water in the Godāvari. The rainfall in 1899 was only 15 inches, less than half the normal quantity. The *kharīf* and *rabi* crops were one-fourth and one-sixteenth of the normal. Notwithstanding an expenditure exceeding $2\frac{1}{4}$ lakhs, thousands died, and the Census of 1901 showed a decrease of 128,845 persons, while about 22 per cent. of the cattle were lost.

Administration.

The District is divided into three subdivisions, one comprising the *tāluks* of Nānder and Kandahār, the second Deglūr and Biloli, and the third Mudhol and Hadgaon. Each of the last two is under a Second Tālukdār, while the first is under the Third Tālukdār, the First Tālukdār having a general supervision over the work of all his subordinates. Each *tāluk* is under a *tahsīldār*, but the Nānder *tāluk* has a *naib* (deputy) *tahsīldār* as well.

The District civil court is presided over by a Civil Judge, styled the *Nāzim-i-Dīwāni*, while three subordinate civil courts are under Munsifs. The First Tālukdār is the chief magistrate, and the District Civil Judge is also a joint-magistrate, who exercises magisterial powers during the absence of the First Tālukdār from head-quarters. The two Second Tālukdārs, as a special case, exercise first-class powers and the Third Tālukdār second-class powers within their respective subdivisions, wh

the *tahsīldārs* have third-class powers. In ordinary times serious crime is not heavy, but adverse seasons cause an increase in dacoities and cattle-thefts.

Prior to the introduction of District administration assessments were made on holdings, and revenue was collected either in cash or kind. In 1866 payment in kind was commuted to cash payments, and the *ryotwāri* system was introduced. In 1880 a rough survey was made, and in 1889 the District was regularly settled for a period of fifteen years, the rates being similar to those of Aurangābād and Bhīr Districts and in Berār. The settlement increased the revenue by 39·7 per cent., while the survey showed that the areas of holdings had been understated by 46 per cent. The average assessment on 'dry' land is Rs. 1–13–6 (maximum Rs. 3–0, minimum R. 0–3), and on 'wet' land Rs. 9 (maximum Rs. 10, minimum Rs. 6). In double-cropped lands the assessment for the second crop is half that for the first. The rates given above for 'wet' lands are for the *ābi* crop, but for the *tābi* crop the maximum is Rs. 20 and the minimum Rs. 15.

The land revenue and the total revenue for a series of years are shown below, in thousands of rupees:—

	1881.	1891.	1901.	1903.
Land revenue . .	13,68	13,37	13,47	13,42
Total revenue . .	15,80	15,03	15,86	16,08

Owing to changes of area made in 1905, the land revenue demand now is about 15 lakhs.

In 1899 a cess of one anna in the rupee was levied on the land revenue, and local boards were constituted. Of the total cess one-fourth, or Rs. 20,600, is set apart for municipal and local works. The First Tālukdār is the president of the District board, and the *tahsīldārs* are the chairmen of the *tāluk* boards, except where there is a Second Tālukdār, who takes the chair at the head-quarters of his subdivision. There is a municipality at Nānder, and each of the head-quarters of the *tāluks* has a small conservancy establishment, the District and *tāluk* boards managing the municipalities as well. The local board expenditure in 1901 was Rs. 16,000.

The First Tālukdār is the head of the police, with the Superintendent (*Mohtamim*) as his executive deputy. Under him are 8 inspectors, 74 subordinate officers, 483 constables, and 25 mounted police, distributed in 29 *thānas* and 36 outposts. There is a District jail at Nānder, and small lock-ups are maintained in the outlying *tahsīl* offices. Short-term prisoners only are kept in the District jail, those whose sentences exceed six months being sent to the Central jail at Aurangābād.

In 1901 the proportion of persons able to read and write was 1·2 per

cent. (4·2 males and 0·03 females), so that the District takes a medium place in the State as regards the literacy of its population. The total number of pupils under instruction in 1881, 1891, 1901, and 1903 was 665, 951, 2,346, and 2,905 respectively. In 1903 there were 68 primary and 3 middle schools, with 155 girls under instruction. The total amount spent on education in 1901 was Rs. 16,000, of which Rs. 10,300 was contributed by the State, and the remainder by the boards. The total receipts from fees amounted to Rs. 810.

The District contains two hospitals, with accommodation for 6 in-patients. The total number of out-patients treated during 1901 was 20,160, and of in-patients 73, while 348 operations were performed. The total expenditure was Rs. 6,516, which was met by the State. The number of persons successfully vaccinated in 1901 was 860, or 1·71 per 1,000 of population.

Nānder Tāluk.—Western *tāluk* of Nānder District, Hyderābād State, with an area of 695 square miles. The population in 1901, including *jāgīrs*, was 102,015, compared with 131,040 in 1891, the decrease being due to the famine of 1900. Till recently the *tāluk* contained one town, NĀNDER (population, 14,184), the head-quarters of the District and *tāluk*, and 276 villages, of which 26 are *jāgīr*. The Godāvari flows south of Nānder from west to east. The land revenue for 1901 was 2·9 lakhs. The soils are chiefly alluvial and *regar*. In 1905 portions of this *tāluk* were transferred to Kalamnūri, Hadgaon, and Mudhol.

Nānder Town.—Head-quarters of the District and *tāluk* of Nānder, Hyderābād State, situated in 19° 9′ N. and 77° 20′ E., on the left or north bank of the Godāvari, 174 miles from Hyderābād and 147 from Aurangābād. Population (1901), 14,184, of whom 653 are Sikhs. Nānder was the capital of Telingāna in the time of Shāh Jahān. The town contains the offices of the First Tālukdār, a *tahsīl* office, and Sadr Munsif and Munsif's courts, police offices, two dispensaries, one of which is for treatment after the *Yūnāni* system, five schools, a State post office, and a British sub-post office. A weekly bazar is held, where a large business is done in cattle, grain, and cotton. Nānder is noted for its fine muslin and gold-bordered scarfs, used as turbans and *sārīs*. In fineness the muslin resembles that of Dacca. On the banks of the Godāvari and adjoining the town is an old fort, now used as a jail, which is said to have been built by the Rājā of Kalam. There are several Hindu temples and two old mosques, besides a *sarai* built by Mīr Alam and the shrines of several Musalmān saints. Gurū Govind was murdered here by an Afghān in the reign of Shāh Alam Bahādur, and his shrine or *Gurūdwāra* is visited by Sikhs from all parts of India. Nānder station on the Hyderābād-Godāvari Valley Railway is situated about a mile north of the town.

Nandgad (*Nandigad*).—Village in the Khānāpur *tāluka* of Belgaum District, Bombay, situated in 15° 34′ N. and 74° 35′ E., 23 miles south of Belgaum town. Population (1901), 6,257. Nandgad is an important trade centre. The chief imports are areca-nuts, coco-nuts, coco-nut oil, dates, and salt, bought from native Christian traders of Goa, while wheat and other grains are exported. The place contains a wealthy population of Brāhmans and Lingāyat traders, and has an unenviable reputation for litigation and lawlessness. Not far from the village is the ruined fort of Pratāpgarh, built by Malla Sarya Desai of Kittūr in 1809. On Shamshergarh, 1½ miles west of the village, is a temple of Tateshwar ascribed to Jakhanāchārya. The place contains three schools for boys and one for girls.

Nāndgaon State.—Feudatory State in the Central Provinces, lying between 20° 50′ and 21° 22′ N. and 80° 26′ and 81° 13′ E., with an area of 871 square miles. The main area of the State, comprised in the Nāndgaon and Dongargaon *parganas*, is situated between Chānda and Drug Districts to the south of Khairāgarh; but the three detached blocks of Pandādeh, Pattā, and Mohgaon lie to the north of this, being separated from it by portions of the Khairāgarh and Chhuīkhadān States and by Drug District. The capital is situated at RĀJ-NĀNDGAON, a station on the Bengal-Nāgpur Railway. The Pattā and Pandādeh tracts contain high hills and dense forests, and Dongargaon to the south of them is composed mainly of broken ground with low peaks covered with a growth of scrub jungle. Towards the east, however, the *parganas* of Nāndgaon and Mohgaon lie in an open black soil plain of very great fertility. The Seonāth river flows through the southern portion of the State, and the Bāgh skirts it on the west. The ruling family are Bairāgis by caste; and as celibacy is one of the observances of this order, the succession devolved until lately on the *chelā* or disciple adopted by the *mahant* or devotee. The first *mahant*, who came from the Punjab, started a money-lending business in Ratanpur towards the end of the eighteenth century with the countenance of the Marāthā governor Bimbājī Bhonsla. His successors acquired the *parganas* of Pandādeh and Nāndgaon from the former Gond and Muhammadan landholders, in satisfaction of loans. Mohgaon was conferred on the fifth *mahant* by the Rājā of Nāgpur with the status of *zamīndār*; and Dongargaon was part of the territory of a *zamīndār* who rebelled against the Bhonslas, and whose estate was divided between the chiefs of Nāndgaon and Khairāgarh as a reward for crushing the revolt. Nāndgaon became a Feudatory State in 1865. Ghāsi Dās, the seventh *mahant* from the founder, was married and had a son, and in 1879 the Government of India informed him that his son would be allowed to succeed. This son,

the late Rājā Bahādur Mahant Balrām Dās, succeeded his father as a minor in 1883, and was installed in 1891, on the understanding that he would conduct the administration with the advice of a Dīwān appointed by Government. He was distinguished by his munificent contributions to objects of public utility, among which may be mentioned the Raipur and Rāj-Nāndgaon water-works. He received the title of Rājā Bahādur in 1893, and died in 1897, leaving an adopted son Rajendra Dās, four years old, who has been recognized as the successor. During his minority the State is being managed by Government, its administration being controlled by a Political Agent under the supervision of the Commissioner, Chhattīsgarh Division. In 1901 the population was 126,365, showing a decrease of 31 per cent. in the previous decade, during which the State was very severely affected by famine. The State contains one town, RĀJ-NĀNDGAON, and 515 inhabited villages; and the density of population is 145 persons per square mile. Telis, Gonds, Ahīrs or Rāwats, and Chamārs are the principal castes. The majority of the population belong to Chhattīsgarh, and, except for a few thousand Marāthās, the Chhattīsgarhī dialect is the universal speech.

The greater part of the cultivated land consists of rich dark soil. In 1904 nearly 550 square miles, or 63 per cent. of the total area, were occupied for cultivation, of which 512 were under crop. The cropped area has decreased in recent years owing to the unfavourable seasons. Rice covers 36 per cent. of the cultivated area, *kodon* 36½ per cent., wheat 13 per cent., and linseed 4 per cent. Nearly 500 tanks have been constructed for irrigation, which supply water to more than 3,000 acres of rice land, while 500 acres on which vegetables are grown are irrigated from wells. About 141 square miles, or a sixth of the total area, are forest. Valuable timber is scarce, the forests being mainly composed of inferior species. *Harrā* (*Terminalia Chebula*) grows in abundance, and there are large areas of bamboo forest in the Pattā tract. Limestone and iron ores exist, but are not worked at present. Brass vessels and ornaments are made at Rāj-Nāndgaon. This town also contains the Bengal-Nāgpur Spinning and Weaving Mills, which were erected by Rājā Balrām Dās and subsequently sold to a Calcutta firm. A new ginning factory is under construction. The Bengal-Nāgpur Railway passes through the State, with stations at Rāj-Nāndgaon and Muripār. There are 148 miles of gravelled and 10 miles of embanked roads. The principal routes are the great eastern road from Nāgpur to Raipur, the Rāj-Nāndgaon-Khairāgarh, Rāj-Nāndgaon-Bījātolā, and Rāj-Nāndgaon-Ghupsāl roads. The bulk of the trade goes to Rāj-Nāndgaon station, which also receives the produce of the adjoining tracts of Raipur.

The total revenue in 1904 was Rs. 3,49,000, the principal heads

of receipt being land revenue and cesses (Rs. 2,45,000), forests and excise (Rs. 20,000 each), and income tax (Rs. 18,000). The State has been cadastrally surveyed, and the system of land revenue assessment follows that prescribed for British Districts of the Central Provinces. A revised settlement was concluded in 1903, and the incidence of land revenue amounts to about 10 annas per acre. The village headmen have no proprietary rights, but receive a proportion of the 'assets' of the village. The total expenditure in 1904 was Rs. 2,63,000. The ordinary tribute paid to Government is at present Rs. 70,000, but is liable to periodical revision. Other items of expenditure were—allowances to the ruling family (Rs. 12,000), general administration (Rs. 83,000), public works (Rs. 28,000), and loans and repayment of debt (Rs. 57,000). Since 1894 about $4\frac{1}{2}$ lakhs has been expended on public works, under the superintendence of the Engineer of the Chhattīsgarh States division. The State supports 30 schools, including one English middle, one vernacular middle, and one girls' school, with a total of 2,571 pupils. In 1904 the expenditure on education was Rs. 9,900. At the Census of 1901 the number of persons returned as literate was 2,151, the proportion of males able to read and write being 3·4 per cent. A dispensary is maintained at Rāj-Nāndgaon, at which 17,000 patients were treated in 1904.

Nāndgaon Tāluka.—South-easternmost *tāluka* of Nāsik District, Bombay, lying between 20° 9′ and 20° 31′ N. and 74° 27′ and 74° 56′ E., with an area of 435 square miles. It contains one town, NĀNDGAON (population, 6,271), the head-quarters; and 88 villages. The population in 1901 was 37,691, compared with 33,652 in 1891. It is the most thinly populated *tāluka* in the District, with a density of only 87 persons per square mile. The demand for land revenue in 1903–4 was Rs. 81,000, and for cesses Rs. 5,000. The north and west are rich and level, but the south and east are furrowed by ravines and deep stream beds. The eastern half is thickly covered with *anjan* trees; the western half is open, with a sparse growth of bushes. The climate is dry and healthy; and the water-supply is abundant, the chief rivers being the Pānjan and Maniād.

Nāndgaon Town.—Head-quarters of the *tāluka* of the same name in Nāsik District, Bombay, situated in 20° 19′ N. and 74° 42′ E., about 60 miles north-east of Nāsik town, on the north-eastern line of the Great Indian Peninsula Railway. Population (1901), 6,271. The town contains a cotton-ginning factory, an English school, and a dispensary.

Nandi.—Village in the Chik-Ballāpur *tāluk* of Kolār District, Mysore, situated in 13° 23′ N. and 77° 42′ E., at the north-east base of Nandidroog, 5 miles south of Chik-Ballāpur. Population (1901),

1,315. The temple of Bhoga Nandīsvara dates at least from the Chola period, the beginning of the eleventh century, but in the courtyard is a Pallava inscription 200 years older. A British military station was established here from 1799 to 1808. The soil around is very fertile. Excellent potatoes and sugar used to be produced, with all kinds of European and other fruits and vegetables. A large annual fair is held at the Sivarātri, when the best bullocks reared in the country are brought for sale. West of the village is a small hill, with 'Haidar's Drop,' over which condemned prisoners were thrown. East of the village is the mosque mentioned in Meadows Taylor's novel *Tippoo Sultaun*, the opening scenes of which are laid at Nandi.

Nandiāl.—Subdivision, *tāluk*, and town in Kurnool District, Madras. *See* NANDYĀL.

Nandidroog.—Famous fortified hill, 4,851 feet high, in the west of Kolār District, Mysore, situated in 13° 22′ N. and 77° 41′ E. It is the highest point in the east of the State, and lies at the termination of a range of hills running north to Penukonda and the Bellary District of Madras. On the top is an extensive plateau sloping to the west, in the centre of which is a large hollow containing a wood, and a tank called the Amrita-sarovara or 'lake of nectar,' faced on the four sides with stone steps. Except on the west, where it is partially united with the adjoining range, the hill presents a nearly perpendicular rocky face, being in fact an almost insulated monolithic mass of granite. The Pālār river has its reputed source at the top, in a well on the east, and the Arkāvati in a well on the west. The lower sides of the hill are clothed with forest. From the second to the eleventh century it was the stronghold of the Ganga kings, who were Jains, and bore the title 'Lord of Nandagiri.' After the Chola conquest at the beginning of the eleventh century the name was changed to Nandigiri, the 'hill of Nandi,' the bull of Siva. The hill was probably first fortified by the Chik-Ballāpur chiefs, but the existing extensive works were erected by Haidar Alī and Tipū Sultān, subsequent to its seizure by the Marāthās in 1770. A precipitous cliff at the south-west angle is pointed out as 'Tipū's Drop,' being the place over which prisoners are said to have been hurled by the orders of that ruler. The capture of Nandidroog by the British under Lord Cornwallis in 1791 was a memorable feat. During the British occupation of Mysore, the salubrity of the spot led to its becoming a hot-season resort for European officials from Bangalore. On the site of an old tower or fort at the highest point was erected a large house, which was long the favourite retreat of Sir Mark Cubbon.

Nandigāma Tāluk.—*Tāluk* in the west of Kistna District, Madras, lying between 16° 36′ and 17° 3′ N. and 80° 1′ and 80° 32′ E., with an

area of 677 square miles. It includes the two detached *zamīndāris* of Munagala and Lingagiri within the Nizām's Dominions. The population in 1901 was 139,958, compared with 126,701 in 1891. The demand on account of land revenue and cesses in 1903–4 amounted to Rs. 3,28,000. It contains one town, JAGGAYYAPETA (population, 8,432), and 169 villages; and the head-quarters are at the village after which it is named. The Muneru, with its tributary the Vareru, and the Palleru flow from the north through the *tāluk* into the Kistna.

Nandikeshwar.—Village in the Bādāmi *tāluka* of Bijāpur District, Bombay, situated in 15° 57′ N. and 75° 49′ E., 3 miles east of Bādāmi town. Population (1901), 1,127. It is of interest as containing Mahākuta, the site of numerous temples and *lingams*. The enclosure in which the Mahākuta temples lie is reached by a steep flight of stone steps, at the foot of which is a doorway guarded by door-keepers said to be figures of the demons Vātāpi and Ilval. The enclosure, which is bounded by a stone wall, is small, but contains numerous temples in various styles, chiefly Chālukyan and Dravidian, many *lingams*, and some snake-stones. In the middle of the enclosure is a pond called Vishnu Pushkarni Tīrth, said to have been constructed by the sage Agastya. In the masonry margin of the pond is a *lingam* shrine, the entrance to which is under water, and in the pond is a *chhatri* containing a four-faced image of Brahma. According to legend the daughter of Devdās, king of Benares, was born with the face of a monkey, and her father was directed in a dream to take her to bathe in the Mahākuta pond. He brought her and built the temple of Mahākuteshwar and some smaller shrines of Mudi Mallikārjun and Virupāksheshwar, all containing *lingams*; and his daughter was cured. To the north-east of the entrance is a shrine of Lajja Gauri, or 'Modest Gauri,' a well-carved black-stone figure of a naked headless woman lying on her back. The story goes that while Devī and Siva were sporting in a pond a devotee came to pay his respects. Siva fled into the shrine and Pārvatī hid her head under the water and stayed where she was. The figure is worshipped by barren women. Outside the enclosure is a pond called Pāpavināshi, or 'Sin-Destroyer,' said to have been built by a seer in the first or *krita* epoch, the water having been produced by the sweat of Mahādeo. A car with large stone wheels stands just outside the enclosure. The Mahākuteshwar temple has six inscriptions on pillars. One, dated in the reign of the Western Chālukya king Vijayāditya (696–733), records a gift by a harlot; another, dated 934 Saka, records a grant by Bappuvaras, a chief of Katak; and the third records the gift of a pillar as a votive offering.

Nandikotkūr.—Northern subdivision and *tāluk* of Kurnool District, Madras, lying between 15° 39′ and 16° 15′ N. and 78° 4′ and 79° 14′ E., with an area of 1,358 square miles. The population in 1901 was

104,167, compared with 88,560 in 1891; the density is only 77 persons per square mile, compared with the District average of 115. It contains 102 villages, 6 of which are *inām*. The demand for land revenue and cesses in 1903–4 amounted to Rs. 2,97,000. It is the largest *tāluk* in the District, but more than half of it is covered by the Nallamalais and other 'reserved' forests. The Tungabhadra for a few miles, and the Kistna throughout its course in the District, bound it on the west and north, separating it from the Nizām's Dominions. The only other river of importance is the Bavanāsi, which drains the eastern part and flows into the Kistna at Sangameswaram, a place of pilgrimage for Hindus. The KURNOOL-CUDDAPAH CANAL passes through it for 69 miles, irrigating 36 villages. The total extent watered in 1903–4 was 9,300 acres. Half of the arable area is black cotton soil, 37 per cent. black loam, and the remaining 13 per cent. red earth. The *tāluk* contains the largest forest area in the District (709 square miles), almost the whole of which lies on the Nallamalais. The annual rainfall is about 29 inches, a little above the District average. The climate is unhealthy, the people suffering very much from fever and enlarged spleen.

Nāndod.—Capital of the State of Rājpīpla, in the Rewā Kāntha Agency, Bombay, situated in 21° 54′ N. and 73° 34′ E., about 32 miles east-by-north from Surat, on rising ground in a bend of the Karjan river. Population (1901), 11,236. As early as 1304 the Muhammadans are said to have driven the Nāndod chief from his capital, and made it the head-quarters of one of their districts, building a mosque and issuing coin. The chief, though he had, since the fall of the Muhammadan power (1730), recovered most of his territory, never brought back his capital from Rājpīpla to Nāndod until 1830. Nāndod was formerly celebrated for its cutlery, sword-belts, and *sāmbar*-skin pouches. There is at the present day a weaving industry in coarse country cloth and tape. Nāndod is a municipality, managed by the State, with an income (1903–4) of Rs. 7,531; a high school has 149 pupils. There are small water-works, intended mainly as a protection against fire; and the chief is now engaged upon a scheme for a supply of drinking-water. The public buildings include a gymnasium and public library, and the Shewan memorial clock-tower.

Nāndūra.—Town in the Malkāpur *tāluk* of Buldāna District, Berār, situated in 20° 49′ N. and 76° 31′ E., with a station on the Nāgpur branch of the Great Indian Peninsula Railway, 324 miles from Bombay. Population (1901), 6,669. The town, which consists of Nāndūra Buzurg and Nāndūra Khurd, divided by the river Dayangangā, was largely populated by dyers fleeing from the depredations of Mahādajī Sindhia in the *pargana* of Pimpalgaon Rājā in 1790.

Nandurbār Tāluka.—*Tāluka* of West Khāndesh District, Bombay,

including the petty subdivision or *pethā* of Navāpur, lying between 21° and 21° 32′ N. and 73° 35′ and 74° 31′ E., with an area of 992 square miles. It contains one town, NANDURBĀR (population, 10,922), its head-quarters; and 284 villages. The population in 1901 was 87,437, compared with 105,866 in 1891. The decrease was due to emigration and the prevalence of cholera. The density, 88 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was 2·6 lakhs, and for cesses Rs. 18,000. The north of the *tāluka* forms part of the rich Tāpti plain. To the south and south-west parallel spurs jutting from the Western Ghāts divide the country into narrow village areas. The east is desolate and bare of trees. The climate is cool, and the annual rainfall averages 25 inches. The water-supply is scanty, the streams of only the Tāpti and the Siva lasting throughout the year.

Nandurbār Town.—Head-quarters of the *tāluka* of the same name in West Khāndesh District, Bombay, situated in 21° 22′ N. and 74° 14′ E., on the Tāpti Valley Railway. Population (1901), 10,922. The town has been a municipality since 1867, with an average income during the decade ending 1901 of Rs. 12,500. In 1903–4 the income was Rs. 16,200, chiefly derived from urban rates and taxes. Nandurbār carries on a considerable trade with Surat and Bombay in cotton, wheat, and seeds. There is also a local trade in wood, transferred from Taloda since the opening of the Tāpti Valley Railway. The town contains three ginning factories and a cotton-press. There are also a Subordinate Judge's court, two dispensaries, and six schools with 450 pupils, of which two, with 39 pupils, are for girls. The exports are cotton, linseed, wheat, gram, and grass oil; the imports are salt, coco-nuts, and spices of all kinds. The staple industry is the extraction of oil from a grass known as *roshā*, about 100 stills being at work. This oil has long been held in repute as a remedy for rheumatism. A branch of the Scandinavian-American Mission has been established in the town. Nandurbār is one of the oldest places in Khāndesh. Under the name of Nandigara it is supposed to be mentioned in a Kānheri cave inscription of the third century A.D. According to local tradition, it was founded by Nand Gauli, in whose family it remained until conquered by the Muhammadans under Muīn-ud-dīn Chishtī, assisted by the Pīr Saiyid Alā-ud-dīn. It was obtained by Mubārak, chief of Khāndesh, from the ruler of Gujarāt, in 1536; in 1665 it was a place of considerable prosperity, renowned for its grapes and melons. In 1666 an English factory was established at Nandurbār, and by 1670 it had become so important a trading centre that the English factors removed hither from Ahmadābād. It subsequently suffered in common with the rest of Khāndesh during the troubles of Bājī Rao's rule; and when it came into the

possession of the British in 1818, the town was more than half deserted. It contains a number of old mosques and remains of ancient buildings. Many of the houses have beautifully carved fronts.

Nandyāl Subdivision.—Subdivision of Kurnool District, Madras, consisting of the NANDYĀL, SIRVEL, and KOILKUNTLA *tāluks*.

Nandyāl Tāluk.—Central *tāluk* of Kurnool District, Madras, lying between 15° 21′ and 15° 42′ N. and 78° and 78° 47′ E., with an area of 854 square miles. The population in 1901 was 110,292, compared with 96,292 in 1891; the density was 129 persons per square mile, compared with an average of 115 in the District as a whole. Next to Rāmallakota, it possesses the largest Musalmān population. It has one town, NANDYĀL (a municipality with a population of 15,137 and the head-quarters); and 91 villages. The demand for land revenue and cesses in 1903–4 amounted to Rs. 2,72,000. It is shut in between two ranges of hills, the Nallamalais on the east and the Erramalas on the west, between which flows the Kunderu river. The Kurnool-Cuddapah Canal runs through the centre from north to south. Most of the country is black cotton soil, but in the villages at the foot of the hills the soil is red and gravelly. The rainfall at Nandyāl town is heavier than at any other station in the District (33 inches), but the average for the *tāluk* is only about 28 inches. The climate is unhealthy, malarial fever being prevalent for the greater part of the year. 'Reserved' forests cover 351 square miles, almost entirely on the Nallamalais and Erramalas.

Nandyāl Town.—Head-quarters of the subdivision and *tāluk* of the same name in Kurnool District, Madras, situated in 15° 30′ N. and 78° 29′ E., on the right bank of the Kunderu, on the trunk road from Kurnool to Chittoor, 45 miles from Kurnool and about 360 miles from Madras city. Population (1901), 15,137. It is the head-quarters of the divisional officer and of the Assistant Superintendent of police. It was constituted a municipality in October, 1899. The receipts and expenditure in 1903–4 amounted to Rs. 23,500 and Rs. 22,000 respectively. Most of the former is derived from the taxes on land and houses and from tolls. The municipal hospital contains beds for 18 in-patients. The town is situated below a large irrigation tank, and being surrounded by 'wet cultivation' on all sides has the reputation of being the most unhealthy station in an unhealthy District. After the opening of the Southern Mahratta Railway, Nandyāl began to rise fast into commercial importance. It is now the centre of the grain and cotton trade of the southern half of the District. It contains two steam cotton-presses owned by Europeans, which employ 119 persons in the season. It is also noted for its lacquer-ware. The chief educational institution is the high school managed by the Society for the Propagation of the Gospel.

Nāngām.—Petty State in Rewā Kāntha, Bombay.

Nānguneri Tāluk.—Southern *tāluk* of Tinnevelly District, Madras, lying between 8° 9′ and 8° 38′ N. and 77° 24′ and 77° 55′ E., with an area of 730 square miles. It is the least thickly peopled *tāluk* in the District, having a population of 202,528 in 1901, compared with 174,418 in 1891, the density being only 280 persons per square mile. But though this is much below the average in Tinnevelly, it is above that for the Presidency as a whole. There are only two towns, Nānguneri (population, 6,580), the head-quarters, and Vadakku Valliyūr (6,903), both situated on the trunk road between Tinnevelly town and Trivandrum. The number of villages is 231. The demand for land revenue and cesses in 1903–4 amounted to Rs. 3,65,000. The *tāluk* is composed of red clay, loams, and sands, excepting a strip parallel with the sea and extending from 3 to 10 miles inland, where white sand and *teri* (blown sand) tracts prevail. Palmyra palms abound throughout, and in the east and south are almost the sole means of support of the inhabitants. In the north-east and centre are numerous tanks, both rain-fed and supplied by mountain streams, and a very large number of wells are to be found in the south. The villages at the foot of the Western Ghāts, which form the western boundary of the *tāluk*, are well supplied during both monsoons with water from that range, which is more picturesque here than elsewhere in the District and is clothed with dense forest to the very top.

Nānguneri Town.—Head-quarters of the *tāluk* of the same name in Tinnevelly District, Madras, situated in 8° 29′ N. and 77° 40′ E., on the trunk road from Tinnevelly town to Trivandrum, 18 miles from the former. Population (1901), 6,580. It contains the *math*, or religious house, of the Vānamāmalai Jīr, the head priest of a section of the Tengalai sub-sect of Vaishnavite Brāhmans. A richly endowed temple is under the control of this *math*. Marugalkurichi, near Nānguneri, is one of the chief centres of the Maravan caste in the District. A special police force is now stationed here, in consequence of the riots which took place between the Maravans and Shānāns in 1899. Local affairs are administered by a Union *panchāyat*.

Nanjangūd Tāluk.—Central *tāluk* of Mysore District, Mysore State, lying between 11° 51′ and 12° 14′ N. and 76° 27′ and 76° 56′ E., with an area of 384 square miles. The population in 1901 was 108,173, compared with 97,374 in 1891. The *tāluk* contains two towns, Nanjangūd (population, 5,991), the head-quarters, and Kalale (2,500); and 206 villages. The land revenue demand in 1903–4 was Rs. 1,71,000. The Kabbani flows through the north of the *tāluk* from west to east, receiving from the south the Nugu and the Gundal. *Jola* is much grown. Gold-mining was commenced at Wolagere, south-west of Nanjangūd, but has been stopped on account of the poor

prospects. In the north-west are quarries of potstone intermixed with schistose mica.

Nanjangūd Town.—Head-quarters of the *tāluk* of the same name in Mysore District, Mysore State, situated in 12° 7′ N. and 76° 41′ E., near the Kabbani, on the Mysore State Railway. The population fell from 7,292 in 1891 to 5,991 in 1901, owing to plague. Early in the eleventh century the town seems to have been held by Danāyaks belonging to Bettadakote on the Gopālswāmi Betta. The place is noted for the temple of Nanjundesvara, which was endowed in the fifteenth century by the Ummattūr chief, in the sixteenth century by the Vijayanagar kings, and latterly, in the nineteenth century, by the Mysore Rājās. The municipality dates from 1873. The receipts and expenditure during the ten years ending 1901 averaged Rs. 9,800 and Rs. 11,000. In 1903-4 they were Rs. 6,300 and Rs. 7,900.

Nanjarājpatna.—Northern *tāluk* of Coorg, Southern India, lying between 12° 21′ and 12° 51′ N. and 75° 41′ and 76° 5′ E., with an area of 355 square miles. The population fell from 43,395 in 1891 to 42,720 in 1901. The *tāluk* contains three towns—SOMVĀRPET (population, 1,745), the head-quarters, Fraserpet (1,600), and Kodlipet (889)—and 280 villages. It is very hilly in the west, having steep declivities from Pushpagiri, and a high ridge runs north and south through Yelusāvirashīme. The Cauvery forms a great part of the eastern boundary, and receives most of the waters of the *tāluk* by means of the Hatti or Hārangi, which flows into it near Rāmaswāmi Kanave. The extreme northern boundary towards the east is formed by the Hemāvati, and farther south, towards the west, by the Kumāradhāri. This part of the country lies outside Coorg proper, and there are no Coorgs in the north except a few officials. The north-west is occupied by Yedavanād Coorgs, who wear the Coorg dress and are *jama* ryots, but are by origin Wokkaligas of Kanara and Manjarābād, and not so wealthy as the Coorgs. The rice-fields in Yedavanād which have a good water-supply yield two crops in the year. The wild sago-palm is carefully tended for the sake of the toddy drawn from it, and for the farinaceous substance obtained from the pith, which is prepared for food by the poorer classes. The inhabitants of the Kanave *hoblis* to the east are identical with the neighbouring Mysore ryots, and cultivate 'dry grains,' such as *rāgi*, horse-gram, beans, &c. The sandal-tree grows abundantly in this *tāluk*.

Nanke.—One of the Southern Shan States, Burma. *See* NAMHKAI.

Nannilam Tāluk.—Eastern *tāluk* of Tanjore District, Madras, lying between 10° 44′ and 11° 1′ N. and 79° 27′ and 79° 51′ E., with an area of 293 square miles. The population was 214,788 in 1901, compared with 216,118 in 1891. NANNILAM TOWN, the head-quarters, has a population (1901) of 6,727, and KUDAVĀSAL, a deputy-*tahsīldār's*

station, 5,419. The number of villages is 242. The demand for land revenue and cesses in 1903-4 amounted to Rs. 11,33,000. The *tāluk* is situated entirely within the rich delta of the Cauvery river and is a singularly prosperous tract. The land revenue averages as much as Rs. 4-13-3 per head, and is the highest in any *tāluk* in the District, while the average holding pays an assessment of Rs. 35, or more than in any other but Shiyāli, and there are more large landowners than in any other *tāluk*. The rainfall is good (44 to 46 inches annually), more than half the soil is alluvial, and by far the larger portion of the land is irrigated.

Nannilam Town.—Head-quarters of the *tāluk* of the same name in Tanjore District, Madras, situated in 10° 53′ N. and 79° 36′ E. Population (1901), 6,727. Weaving is practised on a small scale. The station of this name on the District board railway is about 3 miles from the town. There is an old temple dedicated to Madhuvaneswaraswāmi, or 'the lord of the honey-forest,' and it is pointed out as curious that the wild bees still make their nests in this.

Nānpāra Tahsīl.—Northern *tahsīl* of Bahraich District, United Provinces, comprising the *parganas* of Nānpāra, Charda, and Dharmānpur, and lying between 27° 39′ and 28° 24′ N. and 81° 3′ and 81° 49′ E., with an area of 1,050 square miles. Population increased from 311,281 in 1891 to 325,587 in 1901. There are 546 villages and only one town, NĀNPĀRA (population, 10,601), the *tahsīl* head-quarters. The demand for land revenue in 1903-4 was Rs. 3,92,000, and for cesses Rs. 70,000. The density of population, 310 persons per square mile, is the lowest in the District. A considerable area in the north-west and north is occupied by 'reserved' forests. The Gogra forms the western boundary, and the *tahsīl* is crossed by the Girwā, a branch of the Gogra, and by the Sarjū, a large rapid stream. Towards the centre there is a plateau of good loam, which in the east sinks into the valley of the Rāptī and its tributary, the Bhaklā or Singhiā. The west is a rich alluvial area in the Gogra basin, which seldom requires irrigation. In 1903-4 the area under cultivation was 524 square miles, of which only 20 were irrigated.

Nānpāra Estate.—A *talukdāri* estate in the Bahraich and Gondā Districts of Oudh, United Provinces, comprising an area of nearly 600 square miles. The revenue and cesses payable to Government amount to 2·2 lakhs and Rs. 36,000 respectively, while the rent-roll exceeds 9 lakhs. Shāh Jahān granted a commission to an Afghān named Rasul Khān to reduce the turbulent Banjārās in Bahraich, and assigned him five villages and a tenth of the revenue of a large tract. His descendants acquired a considerable estate. In 1847 Rājā Munawwar Alī Khān was killed by the accidental discharge of a gun, and the estate suffered much from the quarrels of his widows. At annexation

the rightful heir was recognized, and under the able management of the late Sir Jang Bahādur Khān, K.C.I.E., it became extremely prosperous. The present Rājā, Muhammad Sadīk Khān, succeeded in 1902.

Nānpāra Town.—Head-quarters of the *tahsīl* of the same name in Bahraich District, United Provinces, situated in 27° 52′ N. and 81° 30′ E., on the Bengal and North-Western Railway. Population (1901), 10,601. Tradition states that it was founded by Nidhai, an oil-seller, whence the name Nidhaipurwa, corrupted into Nādpāra, and latterly to Nānpāra. About 1630 an Afghān in the service of Shāh Jahān, having received a grant of this and four other villages, laid the foundations of the present NĀNPĀRA ESTATE. The town contains the usual offices, and also a dispensary, and a branch of the American Methodist Mission. It has been administered as a municipality since 1871. During the ten years ending 1901 the income and expenditure averaged Rs. 9,000. In 1903–4 the income was Rs. 14,000, chiefly from octroi (Rs. 8,000); and the expenditure was Rs. 10,000. There is a flourishing export trade in grain and some traffic with Nepāl. Two schools have 150 pupils.

Nānta.—Village in the Lādpura district of the State of Kotah Rājputāna, situated in 25° 12′ N. and 75° 49′ E., about 3 miles north-west of Kotah city. It was given in *jāgīr* to the Jhāla Faujdārs of Kotah about the beginning of the eighteenth century, and in the time of the regent Zālim Singh was a flourishing town; but it is now little more than an agricultural village, containing, among other inhabitants, a colony of about 300 of the criminal tribes (Baoris, Kanjars, and Sānsias), whom the Darbār is endeavouring to convert into respectable agriculturists. Zālim Singh's old palace is a fine specimen of a Rājput baronial residence; but it has not been used for years, and its cloistered court, pavilions, fountains, &c., are falling into decay.

Naogaon Subdivision.—Northern subdivision of Rājshāhi District, Eastern Bengal and Assam, lying between 24° 32′ and 25° 3′ N. and 88° 23′ and 89° 10′ E., with an area of 867 square miles. The subdivision, which is intersected by the Atrai, contains much swampy and waterlogged land to the east of that river; but to the north-west the country forms part of the Bārind, an elevated and undulating tract consisting of a stiff red clay covered with brushwood. The population was 476,072 in 1901, compared with 424,545 in 1891, the density being 549 persons per square mile. It contains 2,346 villages, one of which, NAOGAON (population, 4,092), forms the head-quarters; but no town. It is best known on account of the *gānja* produced in the Naogaon and Pānchupur *thānas*, which supply the whole of Bengal and Assam and part of the United Provinces. A large annual fair is held at MANDĀ.

Naogaon Village.—Head-quarters of the subdivision of the same name in Rājshāhi District, Eastern Bengal and Assam, situated in 24° 48′ N. and 88° 57′ E., on the west bank of the Jamunā river. Population (1901), 4,092. The village derives importance from being the centre of the *gānja* cultivation, and nearly a lakh has been spent on the *gānja* offices and storehouses. It contains the usual subdivisional offices; the sub-jail has accommodation for 18 prisoners.

Naorangpur.—*Zamīndāri tahsīl* of Vizagapatam District, Madras. *See* NOWRANGPUR.

Naosāri.—*Prānt*, *tāluka*, and town in Baroda State. *See* NAVSĀRI.

Nāpād.—Village in the Anand *tāluka* of Kaira District, Bombay, situated in 22° 29′ N. and 72° 59′ E., 14 miles west of the Vāsad railway station. Population (1901), 5,053. Till 1869 Nāpād was a *māmlatdār's* station. North of the village is a handsome pond, 500 yards in circuit, said to have been built about four hundred years ago by a Pathān named Taze Khān Narpāli, governor of Petlād. It is enclosed by brick walls, and is octagonal in shape, a triangular flight of steps within each side leading to the water. On the west is an Idgāh, or place for Id prayers, with a flight of granite steps leading to the lake. Along the bank beyond the Idgāh are traces of terraces and other buildings. The well, to the east of the village, also the work of Taze Khān Narpāli, was repaired in 1838 by a Baroda merchant.

Nar.—Town in the Petlād *tāluka*, Baroda *prānt*, Baroda State, situated in 22° 28′ N. and 72° 45′ E., on the Petlād-Cambay Railway. Population (1901), 6,525. The town possesses a vernacular school and two *dharmsālas*.

Nāra.—Petty State in REWĀ KĀNTHA, Bombay.

Nāra, Eastern.—An important water channel in Sind, Bombay. It is commonly spoken of as a natural branch of the Indus, and, judging from the enormous size of its bed and the fact that it has no source, may possibly have been so formerly. The upper part of the Nāra river, as it existed before works were undertaken on it by the British Government, was merely a small channel in the sandhills of the eastern desert of Sind, through which spill-water from the Indus, above Rohri, found its way to the alluvial plain of the Indus in Central and Lower Sind. As much as 90,000 cubic feet per second was roughly calculated to have spilled into it during the flood of 1851. Owing to the very uncertain supply thus received in the Nāra, a channel from the Indus at Rohri, 12 miles in length, known as the Nāra Supply Channel, was constructed by Government in 1858–9, on the recommendation of Lieutenant Fife. This channel was designed to carry an average discharge of 8,413 cubic feet per second during the inundation period, but at times twice

this quantity has passed through it. The Nāra river itself has remained untouched from the tail of the supply chanel to the Jāmrao Canal mouth, a length of 100 miles, and this length has been gradually canalized by the silty discharge passing down it.

From 1854 to 1858 most of the depressions on the left side of the Nāra between the Jāmrao mouth and the present head of the Thar Canal were embanked, and in 1857 water, admitted as an experiment, flowed at least as far south as the embankments extended. Between 1860 and 1867 the Nāra bed from the Makhi Weir to the Thar Weir was cleared in lengths aggregating 40 miles and widths averaging 150 feet. From 1876 to 1886 this work was continued below the Thar Weir. In 1884 the first cut was made by Government through the Allah Band, a broad ridge of ground on the Rann of Cutch thrown up by an earthquake in 1819. The course of the Nāra is generally southwards, crossing the territory of the Mīr of Khairpur for a distance of 100 miles and then running through the Thar and Pārkar District, having generally on its left bank the sandhills of the desert, and discharging at its 250th mile into the Purān, an old channel of the Indus, which flows to the sea 80 miles farther south through the Rann of Cutch.

The principal canals in connexion with the Eastern Nāra and their lengths, including branches, are—the JĀMRAO, 588 miles; the Mithrao, 155 miles; the Thar, 72 miles; and the Hiral, 41 miles. The aggregate cost of these works (exclusive of the Jāmrao) up to the end of 1903–4 amounted to 65·27 lakhs; the receipts in the same year were 5·63 lakhs, and the total charges (exclusive of interest) 1·14 lakhs. The gross income was thus 8·62 per cent. on the capital expended, and the net receipts 6·82 per cent. The area irrigated was 429 square miles.

The Jāmrao, constructed in the years 1894 to 1902, serves the Districts of Thar and Pārkar and Hyderābād, and the others supply the former only. The Nāra Supply Channel, the Eastern Nāra, and the Mithrao are partly navigable for a total length of 425 miles.

Nāra, Western.—Canal in Sind, Bombay. *See* LĀRKĀNA DISTRICT.

Nāra Valley.—Subdivision of Thar and Pārkar District, Sind, Bombay, composed of the UMARKOT, KHIPRO, SANGHAR, MĪRPUR KHĀS, JAMESĀBĀD, PITHORO, and SINGHORO *tālukas*.

Narahiā.—Village in the Madhubanī subdivision of Darbhangā District, Bengal, situated in 26° 22′ N. and 86° 32′ E. Population (1901), 5,069. Narahiā is connected by road with the Bengal and North-Western Railway, and is an important centre for the grain traffic with Nepāl.

Naraina.—Head-quarters of the *tāluk* or subdivision of the same name in the Sāmbhar *nizāmat* of the State of Jaipur, Rājputāna, situated in 26° 48′ N. and 75° 13′ E., on the Rājputāna-Mālwā Railway, 41 miles west of Jaipur city, and 43 miles north-east of Ajmer. Population (1901), 5,266. The town possesses 5 schools attended by 160 boys, and a post office.

The place is famous as the head-quarters of the sect of Dādūpanthis, from whom the foot-soldiers of the State, called Nāgas, are recruited. The Dādūpanthis of Rājputāna numbered 8,871 in 1901, and 8,610 of them, or over 97 per cent., were enumerated in the State of Jaipur. Dādū, the founder of the sect, is said to have lived in the time of Akbar, and to have died in 1603 near the lake at Naraina. The cardinal points of his teaching were the equality of all men, strict vegetarianism, total abstinence from the use of liquor, and lifelong celibacy. His precepts, which numbered 5,000, are all in verse and are embodied in a book called the *Bāni*, which is kept in a sanctuary known as the Dādūdwāra. After Dādū's death his followers were divided into two sects: namely, the Viraktas, who profess to have renounced the world and its pleasures, live on alms, spend their time in contemplation and in imparting the teachings of Dādū to others, and are usually distinguishable by the strip of red cloth which they wear; and the Sādhus or Swāmis, including the section called Nāga. The latter name, which means 'naked,' is said to have been applied to them in consequence of the scantiness of the *dhotī* or loin-cloth which they used to wear. Strict celibacy being enjoined, the Dādūpanthis recruit their numbers by adoption from all but the lowest classes of Hindus and Musalmāns. In the cases of Nāgas, the adopted boys are at once trained in the profession of arms, and thus develop into men of fine physique. During the Mutiny the Nāgas were the only body of men really true to the Darbār, and it has been stated that, but for them, the so-called regular army of Jaipur would have rebelled.

Nāraingaŋj.—Subdivision and town in Dacca District, Eastern Bengal and Assam. *See* NĀRĀYANGANJ.

Naraingarh.—*Tahsīl* of Ambāla District, Punjab, lying at the foot of the Himālayas, between 30° 19′ and 30° 45′ N. and 76° 52′ and 77° 19′ E., with an area of 436 square miles. The population in 1901 was 131,042, compared with 141,326 in 1891. It contains the town of SĀDHAURA (population, 9,812), and 317 villages, of which Naraingarh is the head-quarters. The land revenue and cesses in 1903–4 amounted to 2·3 lakhs. The *tahsīl* includes a tract of hilly country on the north, culminating in the Karoh peak, 4,919 feet above the sea. The lower hills are devoid of vegetation; and below them comes a tract of rough

stony country much cut up by ravines, the continuous advance of which is a most serious difficulty for the cultivator. The southern half is fairly level.

Narāl Subdivision.—South-eastern subdivision of Jessore District, Bengal, lying between 22° 58′ and 23° 21′ N. and 89° 23′ and 89° 50′ E., with an area of 487 square miles. The population in 1901 was 352,281, compared with 348,537 in 1891. It contains 810 villages, including NARĀL, its head-quarters; but no town. The subdivision, which is entirely alluvial, is less unhealthy than other parts of Jessore, and being lower, it still receives occasional deposits of silt; it is thus more thickly populated, and has a density of 723 persons per square mile. The principal marts are at Narāl, Naldi, and Lohāgarā.

Narāl Village.—Head-quarters of the subdivision of the same name in Jessore District, Bengal, situated in 23° 10′ N. and 89° 30′ E., 22 miles east of Jessore town on the Chitrā river, which is here very deep and affords a regular route for large boats throughout the year. Population (1901), 1,225. Narāl contains the usual public offices; the sub-jail has accommodation for 12 prisoners, and there is a good collegiate school teaching up to the F.A. standard, with a hostel attached. The Narāl family are the leading landholders of Jessore District, and several works of public utility have been constructed by them.

Narasannapeta Tahsīl.—*Zamīndāri tahsīl* in Ganjām District, Madras, consisting of several petty proprietary estates which adjoin the Government *tāluk* of Chicacole, with an area of 51 square miles. The population in 1901 was 26,452, compared with 24,878 in 1891. They live in 41 villages. The head-quarters, NARASANNAPETA TOWN, is outside its limits. The demand for land revenue and cesses in 1903–4 was Rs. 40,400. The Urlam estate, which is nearly 20 miles in area, is a prosperous tract, being fertile and irrigated by river channels from the Vamsadhāra. Bell-metal vessels are made at Mobagām.

Narasannapeta Town.—Head-quarters of a deputy-*tahsīldār* in the Chicacole *tāluk* of Ganjām District, Madras, situated in 18° 26′ N. and 84° 2′ E., on the trunk road 14 miles north of Chicacole. Population (1901), 7,886, chiefly weavers and traders.

Narasapatnam Subdivision.—Subdivision of Vizagapatam District, Madras, consisting of the *tāluk* of GOLGONDA (including Agency area), the *zamīndāri tahsīls* of VĪRAVILLI (including Agency area) and ANAKĀPALLE, and the *tāluk* of SARVASIDDHI.

Narasapatnam Town.—Head-quarters of the Golgonda *tāluk* and of the Narasapatnam subdivision, Vizagapatam District, Madras, situated in 17° 40′ N. and 82° 37′ E., 8 miles from the foot of the hills in the midst of a fertile plain. Population (1901), 10,589. It is a centre of trade with the hills to the north.

Narasapur Subdivision.—Subdivision of Kistna District, Madras consisting of the NARASAPUR, TANUKU, and BHĪMAVARAM *tāluks.*

Narasapur Tāluk.—Coast *tāluk* of Kistna District, Madras, lying between 16° 19′ and 16° 39′ N. and 81° 27′ and 81° 57′ E., which till recently included the large NAGARAM ISLAND since transferred to Godāvari District. Its present area is 296 square miles. The population in 1901 was 151,342, compared with 136,064 in 1891. It contains three towns, NARASAPUR (population, 10,279), the head-quarters, PĀLAKOLLU (10,848), and ACHĀNTA (8,382); and 78 villages. The demand for land revenue and cesses in 1903–4 amounted to Rs. 10,2[illegible],000. The *tāluk* is very fertile. The chief crops are rice and garden and orchard produce.

Narasapur Town.—Head-quarters of the subdivision and *tāluk* of the same name in Kistna District, Madras, situated in 16° 26′ N. and 81° 42′ E., on the Vasishta mouth of the Godāvari river, 6 miles from the sea, and on the Narasapur canal, 35 miles from Nidadavolu. Population (1901), 10,279. The Dutch very early established a branch of their PĀLAKOLLU factory at Narasapur and had an iron foundry here; some of their buildings still remain. The English occupied the northern suburb in 1677. In 1756 they were expelled from this, as from their other factories in the District, by the French. In 1759 it was regained by an expedition detached by Colonel Forde on his way to Masulipatam. The factory was not abolished till 1827. The trade of Narasapur has now almost entirely disappeared, and the only article of export is bones, which are sent away to the value of Rs. 1,500 annually. The Taylor high school, founded in 1852, deserves mention as the outcome of the first systematic attempt to extend primary education in the Presidency. It is managed by a local committee and has now 400 pupils. The town has been constituted a Union.

Narasaraopet Subdivision.—Subdivision of Guntūr District, Madras, consisting of the NARASARAOPET, PALNĀD, and VINUKONDA *tāluks.*

Narasaraopet Tāluk.—*Tāluk* in Guntūr District, Madras, lying between 15° 53′ and 16° 24′ N. and 79° 48′ and 80° 21′ E., with an area of 713 square miles. The population in 1901 was 168,547, compared with 156,377 in 1891. NARASARAOPET, the head-quarters, is a Union of 7,108 inhabitants; and there are also 114 villages. The demand for land revenue and cesses in 1903–4 amounted to Rs. 4,30,000. Most of the *tāluk* produces 'dry crops,' but there are patches of irrigation under rain-fed tanks. The grazing land is excellent and the cattle bred here are well-known. Several bold hills, such as Kotappakonda, diversify the country; and it is intersected by water-courses, which are dry for the greater part of the year, but become foaming torrents when rain falls.

Narasaraopet Town.—Head-quarters of the subdivision and *tāluk* of the same name in Guntūr District, Madras, situated in 16° 15′ N. and 80° 4′ E., on the Southern Mahratta Railway. Population (1901), [illegible]108. It has been constituted a Union. It took its name from [illegible]arasa Rao, father of the Malrāzu Venkata Gunda Rao who enlarged [illegible]he fine tank in the town. There are ancient temples in the place, and inscriptions are to be seen on a slab in front of the shrine to Pattābhi Rāmaswāmi and in the roof of that to Bhīmeswara. Not far off is the famous shrine at Kotappakonda, where at the new moon festival in February as many as 40,000 Hindus gather.

Nārāyanganj Subdivision.—North-eastern subdivision of Dacca District, Eastern Bengal and Assam, lying between 23° 34′ and 24° 15′ N. and 90° 27′ and 90° 59′ E., with an area of 641 square miles. The greater part of the subdivision consists of a level plain intersected by numerous watercourses, but to the extreme west this plain merges in a small tract of broken jungle-covered country. The population was 660,712 in 1901, compared with 574,516 in 1891, the density being 1,031 persons per square mile. The subdivision contains one town, NĀRĀYANGANJ (population, 24,472), its head-quarters; and 2,177 villages. The principal seats of commerce are Nārāyanganj town on the Lakhyā, and Baidya Bāzār and Narsingdī on the Meghnā. The chief place of historical importance is SONĀRGAON. A large bathing festival is held annually at Nāngalband.

Nārāyanganj Town.—Head-quarters of the subdivision of the same name in Dacca District, Eastern Bengal and Assam, situated in 23° 37′ N. and 90° 30′ E., on the west bank of the Lakhyā at its confluence with the Dhaleswarī just before that river joins the Meghnā. The population in 1901 was 24,472, of whom 50·8 per cent. were Hindus and 48·4 Muhammadans; there were only 169 Christians. Nārāyanganj is distant from DACCA CITY 9 miles by land and about 20 by water, and is in reality the port of that city; it extends for 3 miles along the bank of the Lakhyā, and, with its suburb Madanganj on the opposite bank, is the most progressive town in Eastern Bengal. The population has nearly doubled since 1881; and had the Census been taken during the rains in the height of the jute season, the number of inhabitants would probably have exceeded 35,000. In the neighbourhood are several forts built by Mīr Jumla to repel the invasions of the Maghs or Arakanese, and a mosque known as the Kadam Rāsul which is held in great reverence by pious Musalmāns. Nārāyanganj, including Madanganj, was constituted a municipality in 1876. The income during the decade ending 1901–2 averaged Rs. 55,000 and the expenditure Rs. 52,000. In 1903–4 the income was Rs. 76,000, including Rs. 38,000 derived from a tax on houses and lands, Rs. 22,000 from a conservancy rate,

and Rs. 6,000 from tolls. The incidence of taxation was Rs. [illegible] per head of the population. In the same year the expenditure was Rs. 69,000, including Rs. 3,000 spent on lighting, Rs. [illegible] on drainage, Rs. 25,000 on conservancy, Rs. 3,000 on medical relief, Rs. 16,000 on roads, and Rs. 1,100 on education. Nārāyanganj has the appearance of a Western rather than of an Eastern town, and has not unjustly been called the model municipality of Bengal. The municipality owns a large market, and a scheme has been formulated for supplying two of the three wards with unfiltered water at an estimated cost of Rs. 1,79,000.

Nārāyanganj was already a busy market a century ago. Since then its commerce has increased enormously, owing to the growth of the jute trade and development of rail and steamer communications; and it is now the busiest trade mart in Eastern Bengal. It taps the huge jute areas of Mymensingh, north Tippera, and Dacca, and focuses the imports from Calcutta for their dense populations. Nārāyanganj owes its prosperity to its ready access to the seaports. It is connected with Calcutta by steamer and rail via Goalundo, and with Chittagong by steamer and rail via Chāndpur, or by brigs, which, however, are now being ousted by the railway. On account of its trade with Chittagong, Nārāyanganj has been declared a port under the Sea Customs Act. The expansion of the jute trade is of comparatively recent date; in 1872 there were only 6 screw-houses in Nārāyanganj, while in 1901 there were 53 factories with 73 presses, mostly hydraulic, employing 6,000 hands. The annual export has increased from 40,000 to 320,000 tons during the last thirty years. The jute is pressed into bales for export to Europe, two-thirds of the output being shipped from Calcutta, and one-third from Chittagong.

Nārāyanganj contains the usual public offices, a sub-jail with accommodation for 36 prisoners, civil courts, a branch of the Bank of Bengal, two higher class English schools, and a hospital with 30 beds.

Nārāyanpet Tāluk. — Former *tāluk* in Mahbūbnagar District, Hyderābād State, with an area of 345 square miles. The population in 1901, including *jāgīrs*, was 68,164, compared with 59,967 in 1891. It contained one town, NĀRĀYANPET (population, 12,011) the head-quarters; and 78 villages, of which 6 were *jāgīr*. The land revenue in 1901 was 1·3 lakhs. In 1905 the *tāluk* was broken up, and its villages were transferred to the Makhtal *tāluk* and the Yadgīr *tāluk* in Gulbargā District.

Nārāyanpet Town.—Town in the Makhtal *tāluk* of Mahbūbnagar District, Hyderābād State, situated in 16° 45′ N. and 77° 30′ E., 36 miles west of Mahbūbnagar town. Population (1901), 12,011. It is noted for the manufacture of superior silk and cotton *sārīs*, and

slippers of coloured leather, which are largely exported. It is the head-quarters of the Second Tālukdār, and has a Munsif's court, a post office, a dispensary, a boys' and a girls' school with 319 and 36 pupils respectively, and the Police inspector's office. It is a flourishing commercial centre, connected with Saidāpur station on the Great Indian Peninsula Railway by a feeder road 21 miles long.

Narbadā Division.—Division in the Central Provinces. *See* NERBUDDA.

Narbadā River (*Narmadā*; the *Namados* of Ptolemy; *Namnadios* of the *Periplus*).—One of the most important rivers of India, which rises on the summit of the plateau of AMARKANTAK (22° 41′ N. and 81° 48′ E.), at the north-eastern apex of the Sātpurā range, in Rewah (Central India), and enters the sea below Broach in the Bombay Presidency after a total course of 801 miles.

The river issues from a small tank 3,000 feet above the sea, surrounded by a group of temples and guarded by an isolated colony of priests, and falls over a basaltic cliff in a descent of 80 feet. After a course of about 40 miles through the State of Rewah, it enters the Central Provinces and winds circuitously through the rugged hills of Mandlā, pursuing a westerly course until it flows under the walls of the ruined palace of Rāmnagar. From Rāmnagar to Mandlā town it forms, for some 15 miles, a deep reach of blue water, unbroken by rocks and clothed on either bank by forest. The river then turns north in a narrow loop towards Jubbulpore, close to which city, after a fall of 30 feet called the *Dhuāndhāra* or 'fall of mist,' it flows for two miles in a narrow channel which it has carved for itself through rocks of marble and basalt, its width here being only about 20 yards. Emerging from this channel, which is well-known as the 'Marble Rocks,' and flowing west, it enters the fertile basin of alluvial land forming the Narbadā Valley, which lies between the Vindhyan and Sātpurā Hills, and extends for 200 miles from Jubbulpore to Handiā, with a width of about 20 miles to the south of the river. The Vindhyan Hills rise almost sheer from the northern bank along most of the valley, the bed of the river at this part of its course being the boundary between the Central Provinces and Central India (principally the States of Bhopāl and Indore). Here the Narbadā passes Hoshangābād and the old Muhammadan towns of Handiā and Nimāwar. The banks in this part of its valley are about 40 feet high, and the fall in its course between Jubbulpore and Hoshangābād is 340 feet. Below Handiā the hills again approach the river on both sides and are clothed with dense forests, the favourite haunts of the Pindāris and other robbers of former days. At Mandhār, 25 miles below Handiā, there is a fall of 40 feet, and another of the same height occurs at Punāsa. The bed of the river in its whole length within the Central

Provinces is one sheet of basalt, seldom exceeding 150 yards in absolute width, and, at intervals of every few miles, upheaved into ridges which cross it diagonally, and behind which deep pools are formed. Emerging from the hills beyond Māndhāta on the borders of the Central Provinces, the Narbadā now enters a second open alluvial basin, flowing through Central India (principally the State of Indore) for nearly 100 miles. The hills are here well away from the river, the Sātpurās being 40 miles to the south and the Vindhyas about 16 miles to the north. In this part of its course the river passes the town of Maheshwar, the old capital of the Holkar family, where its northern bank is studded with temples, palaces, and bathing *ghāts*, (many of them built by the famous Ahalyā Bai whose mausoleum is here. The last 170 miles of the river's course are in the Bombay Presidency, where it first separates the States of Baroda and Rājpīpla and then meanders through the fertile District of Broach. Below BROACH CITY it gradually widens into an estuary, whose shores are 17 miles apart as it joins the Gulf of Cambay.

The drainage area of the Narbadā, estimated at about 36,000 square miles, is principally to the south and comprises the northern portion of the Sātpurā plateau and the valley Districts. The chief tributaries are the Banjār in Mandlā, the Sher and Shakkar in Narsinghpur, and the Tawā, Ganjāl, and Chhotā Tawā in Hoshangābād District. The only important tributary to the north is the Hiran, which flows in beneath the Vindhyan Hills, in Jubbulpore District. Most of these rivers have a short and precipitous course from the hills, and fill with extraordinary rapidity in the rains, producing similarly rapid floods in the Narbadā itself. Owing to this and to its rocky course, the Narbadā is useless for navigation except by country boats between August and February, save in the last part of its course, where it is navigable by vessels of 70 tons burden up to the city of Broach, 30 miles from its mouth. It is crossed by railway bridges below Jubbulpore, at Hoshangābād, and at Mortakka. The influence of the tides reaches to a point 55 miles from the sea. The height of the banks throughout the greater part of its course makes the river useless for irrigation.

The Narbadā, which is referred to as the Rewā (probably from the Sanskrit root *rev*, 'to hop,' owing to the leaping of the stream down its rocky bed) in the Mahābhārata and Rāmāyana, is said to have sprung from the body of Siva and is one of the most sacred rivers of India, local devotees placing it above the Ganges, on the ground that, whereas it is necessary to bathe in the Ganges for forgiveness of sins, this object is attained by mere contemplation of the Narbadā. 'As wood is cut by a saw (says a Hindu proverb), so at the sight of the holy Narbadā do a man's sins fall away.' Gangā herself, so local legend avers, must

dip in the Narbadā once a year. She comes in the form of a coal-black cow, but returns home quite white, free from all sin. The Ganges, moreover, was (according to the *Rewā Purāna*) to have lost its purifying virtues in the year 1895, though this fact has not yet impaired its reputation for sanctity. At numerous places on the course of the Narbadā, and especially at spots where it is joined by another river, are groups of temples, tended by Narmdeo Brāhmans, the special priests of the river, where annual gatherings of pilgrims take place. The most celebrated of these are Bherāghāt, Barmhān, and Onkār Māndhāta in the Central Provinces, and Barwānī in Central India, where the Narbadā is joined by the Kapilā. All of these are connected by legends with saints and heroes of Hindu mythology; and the description of the whole course of the Narbadā, and of all these places and their history, is contained in a sacred poem of 14,000 verses (the *Narmadā Khanda*), which, however, has been adjudged to be of somewhat recent origin. Every year 300 or more pilgrims start to perform the *pradakshina* of the Narbadā, that is, to walk from its mouth at Broach to its source at Amarkantak on one side, and back on the other, a performance of the highest religious efficacy. The most sacred spots on the lower course of the river are Suklatīrtha, where stands an old banyan-tree that bears the name of the saint Kabīr, and the site of Rājā Bali's horse-sacrifice near Broach.

The Narbadā is commonly considered to form the boundary between Hindustān and the Deccan, the reckoning of the Hindu year differing on either side of it. The Marāthās spoke of it as 'the river,' and considered that when they had crossed it they were in a foreign country. During the Mutiny the Narbadā practically marked the southern limit of the insurrection. North of it the British temporarily lost control of the country, while to the south, in spite of isolated disturbances, their authority was maintained. Hence, when, in 1858, Tāntiā Topī executed his daring raid across the river, the utmost apprehension was excited, as it was feared that, on the appearance of the representative of the Peshwā, the recently annexed Nāgpur territories would rise in revolt. These fears, however, proved to be unfounded and the country remained tranquil.

Narcondam.—Volcanic island in the Andaman Sea, lying about 105 miles south-east of Port Blair. *See* ANDAMANS.

Naregal.—Town in the Ron *tāluka* of Dhārwār District, Bombay, situated in 15° 34′ N. and 75° 48′ E., 55 miles east of Dhārwār town. Population (1901), 8,327. Naregal is an old town, with temples and inscriptions dating from the twelfth to the thirteenth century. Weekly markets are held on Monday. The town contains a school.

Nargund.—Town in the Navalgund *tāluka* of Dhārwār District, Bombay, situated in 15° 43′ N. and 75° 24′ E., 32 miles north-east of Dhārwār town. Population (1901), 10,416. Nargund was constituted a municipality in 1871, the average income during the decade ending 1901 being Rs. 5,000. In 1903–4 the income was Rs. 7,200. Though not a manufacturing town, it is a busy entrepôt of trade, where the merchants of Dhārwār and North Kanara exchange rice, sugar, spices, and other agricultural products. Nargund was one of the earliest possessions wrested from the feeble grasp of the Muhammadan Sultāns of Bijāpur by Sivajī. It was subsequently handed over to Rāmrao Bhāve with some surrounding villages. On the conquest of the Peshwā's territory by the British, it was restored by them to Dādājī Rao, the chief then found in possession. An agreement was concluded with him, by which he was exempted from the payment of his former tribute of Rs. 3,470, from *nazarāna* or presents on occasions, and from rendering service, on condition of loyalty to, and dependence on, the British Government. This petty principality, containing 36 towns and villages, with a population of about 25,000, was, at the time of the Mutiny in 1857, held by Bhāskar Rao, *alias* Bābā Sāhib. Affected by the disturbances in the north, the chief rose in open rebellion and murdered Mr. Manson, the Commissioner and Political Agent, Southern Marāthā Country. A British force was dispatched at once to Nargund; and, after a short but decisive engagement, the fort and town fell. The fortifications have since been dismantled, and the fort has been rendered untenable by destroying some of the chief reservoirs. Nargund contains a large temple of Shankarling and a smaller one of Dandeshwar, with an inscription dated 1147; another temple, of Venkatesh, on the hill-top in the fort, was built in 1720. An annual fair attended by 10,000 people is held in honour of Venkatesh on the full moon of Ashvin, and lasts for twelve days. The town contains six schools, including one for girls.

Narhī.—Town in the District and *tahsīl* of Balliā, United Provinces, situated in 25° 42′ N. and 84° 2′ E., on the road from Korantādīh to Balliā town. Population (1901), 6,462. Narhī is merely an overgrown village, and its inhabitants have a bad reputation for harbouring criminals. They are chiefly Bhuinhārs, who have lost their proprietary rights, but still refuse to pay rent to the Dumraon estate which has acquired them. There is a school with 42 pupils.

Nāri.—River in Baluchistān, known also as the Anambār and the Beji. It rises near Spīrarāgha and has a total length in Baluchistān of about 300 miles. The upper part of its course is known as the Loralai river, and after the junction of the latter with the

Sehān it becomes the Anambār. On passing into the Marri country it is called the Beji. Near Bābar Kach it is met from the north-west by the Dādā and Sāngān streams, and shortly afterwards debouches into the Kachhi plain, whence it branches into a number of channels (8° 30′ N., 67° 57′ E.), eventually reaching Sind. Its large catchment area covers Loralai and Sibi Districts and Kachhi. The Nāri is subject to very heavy floods. Temporary embankments are erected in its bed to permit the cultivation of lands in Loralai District, and a Government irrigation work to carry flood-water has also been constructed. All the permanent water-supply is used at Sibi for cultivation, and the central part of Kachhi depends entirely on its flood-water, which is raised by ingeniously contrived temporary earthen embankments of great size. Much of the summer flood-water, however, runs to waste.

Narkher.—Town in the Kātol *tahsīl* of Nāgpur District, Central Provinces, situated in 21° 29′ N. and 78° 32′ E., 45 miles north-west of Nāgpur city by road through Kalmeshwar and Sawargaon. Population (1901), 7,726. Narkher is not a municipality, but a town fund is raised for sanitary purposes. The population is almost solely agricultural, and the lands surrounding the town are very rich, the land revenue from the fiscal 'village' being the highest in the District. A large cattle market is held weekly, and there is a vernacular middle school.

Narmada.—River in Central and Western India. *See* NARBADĀ.

Narnāla.—Hill fortress in the Akot *tāluk* of Akola District, Berār, situated in 21° 15′ N. and 77° 4′ E., on the southernmost range of the Sātpurā Hills, at an elevation of 3,161 feet. The hill was probably fortified at an early date, for Firishta says that the fort was repaired by the Bahmani king Ahmad Shāh Walī, when he encamped at Ellichpur from 1425 to 1428. The works comprise three distinct forts: Jafarābād on the east, Narnāla itself in the centre, and Teliyagarh on the west. There are six large and twenty-one small gates. The system of water-supply in this fort was admirable, and portions of an aqueduct and of drains for catching surface water still remain. Within the walls are situated nineteen tanks, of which only four hold water throughout the year. Four very curious covered stone cisterns are supposed, apparently on slender grounds, to have been the work of Jains before the Muhammadan invasion. The Jāma Masjid, now in ruins, is said to have borne an Arabic inscription recording its construction in 1509 by Mahābat Khān, but this has disappeared. A small mosque attributed to Aurangzeb is in good repair. Other buildings are the *Bāradarī*, the *Sarrāfkhāna*, the arsenal, and the elephant stables. There are also the ruins of a palace erected for Raghujī Bhonsla, and on Teliyagarh is a small mosque. The

most interesting part of the fort is the innermost of the three gateways of the Shāhnūr entrance. It is built of white sandstone and is highly ornate, being decorated with conventional lotus flowers, a rich cornice, and Arabic inscriptions, and flanked by projecting balconies with panels of stone lattice-work displaying considerable variety of design. A short text from the Korān, used as a chronogram, gives the date of the building of the gate as 1486, and the date is also expressed in words. A second inscription records the fact that the gate was built in the reign of Shahāb-ud-dīn Mahmūd Shāh (Bahmani), and contains an interesting though evidently inaccurate account of that monarch's descent. In 1437, when Nasīr Khān, Sultān of Khāndesh, invaded Berār, the Khān-i-Jahān, governor of the province, who remained faithful to his master, the Bahmani king Alā-ud-dīn Ahmad II, was besieged in Narnāla by disaffected nobles, but managed to break through the besieging force and joined Khalaf Hasan before his victory at ROHANKHED. Burhān Imād Shāh, the last of the independent kings of Berār, was confined in Narnāla by his minister Tufāl Khān; and in 1572 Murtazā Nizām Shāh of Ahmadnagar laid siege to the fortress and captured both king and minister, subsequently putting them to death. In 1597–8 the fort was captured by Akbar's officers, Saiyid Yūsuf Khān Mashhadī and Shaikh Abul Fazl, from the officer who held it for the Sultān of Ahmadnagar.

Nārnaul Tahsīl.—Southern *tahsīl* of the Mohindargarh *nizāmat*, Patiāla State, Punjab, lying between 27° 18′ and 28° 8′ N. and 75° 58′ and 76° 17′ E., with an area of 277 square miles. The population in 1901 was 85,130, compared with 88,045 in 1891. The *tahsīl* contains the town of NĀRNAUL (population, 19,489), the head-quarters; and 157 villages. The land revenue and cesses in 1903–4 amounted to 2·3 lakhs.

Nārnaul Town.—Head-quarters of the *tahsīl* of the same name in the Mohindargarh *nizāmat*, Patiāla State, Punjab, situated in 28° 3′ N. and 76° 10′ E., on the banks of the Chhalak Nadi, 37 miles from Rewāri, with which it is connected by the Rewāri-Phulera branch of the Rājputāna-Mālwā Railway. It is, next to Patiāla, the most important town in the State, having a population (1901) of 19,489. The town is undoubtedly of some antiquity. Tradition assigns its foundation to Rājā Launkarn, after whose wife Nār Laun it was named; but in the Mahābhārata the country south of Delhi is called Narrāshtra, whence more probably is derived Nārnaul. By the Muhammadan historians it is first mentioned as assigned by Altamsh as a fief to his Malik, Saif-ud-dīn; and in 1411 it was in the possession of Iklīm Khān and Bahādur Nāhir, and plundered by Khizr Khān. It claims to be the birthplace of Sher Shāh; and Ibrāhīm Khān, his grandfather, died

here, his tomb still existing in the town. Sher Shāh's vassal, Hāji Khān, was expelled from Nārnaul by the redoubtable Tardi Beg on the restoration of Humāyūn; and, in the reign of Akbar, Shāh Kuli Bahram adorned the town with buildings and large tanks. Under Aurangzeb, in 1672, Nārnaul was the centre of a remarkable religious revolt. A body of Satnāmis, a sect who considered themselves immortal, attacked the town, took it, and established a rude government. They were eventually suppressed with great slaughter. When the Mughal power decayed, Nārnaul became an apanage of Jaipur. In 1795 it was taken by Appa Khande Rao and George Thomas from Lakwa Dādā, an officer of De Boigne, and was afterwards given to Murtaza Khān Bahraich. In reward for his service in the Mutiny of 1857, Mahārājā Narindar Singh of Patiāla obtained the *ilāka* of Nārnaul, valued at 2 lakhs annually. The modern town has a considerable trade in cotton, *ghī*, wool, and other products. It has also some manufactures, lime and carts being the chief. It possesses a grain market, an Anglo-vernacular middle school, a dispensary, and a police station. Nārnaul was constituted a municipality in 1906.

Narod (or Ranod).—Village in the Narwar district of Gwalior State, Central India, situated in 25° 5′ N. and 77° 53′ E., on the Ahirāvatī or Ahīrpāt Nāla, a tributary of the Sind, 1,415 feet above the sea. Population (1901), 2,985. The site is covered with Hindu and Muhammadan remains, surrounded by fine groves of tamarind and mango. The most remarkable building is a monastery, built in Hindu style of massive sandstone blocks without mortar, and roofed with huge slabs of the same material. In the wall of this building, which is now called the Kokai Mahal, is a long Sanskrit inscription referring to the erection of the monastery. It mentions a king Avantivarman, and on palaeographical grounds may be assigned to the eleventh century. The Muhammadan buildings are of modern date, but many are interesting, especially the Zanjīrī Masjid or 'chain mosque,' so called from its chain-like railing, which was erected in Aurangzeb's reign. Narod was a place of importance until the Marāthā invasion. It was granted in the time of Jahāngīr to Chaudhri Chintāman Bakkāl, whose descendants still hold the *sanad*. During the Marāthā inroads it decreased in importance, and after it fell to Sindhia in the nineteenth century decayed rapidly. The village is enclosed by a high wall pierced with four gates. It contains a school, a State post office, and a police station.

[A. Cunningham, *Archaeological Survey of India*, vol. ii, p. 303; *Epigraphia Indica*, vol. vii, p. 35.]

Nārowāl.—Town in the Raya *tahsīl* of Siālkot District, Punjab, situated in 32° 5′ N. and 74° 53′ E., on the north bank of the Rāvi, 35 miles south-east of Siālkot town. Population (1901), 4,422. The

name is derived from its founder Nāru, a Bājwā Sānsi, who is said to have settled here four centuries ago. It was formerly the head-quarters of what is now the Raya *tahsīl*. The chief industry is the manufacture of brass vessels, but native shoes of ornamental design are also made. The Church Missionary and Zanāna Missionary Societies established here maintain an Anglo-vernacular middle school and a female hospital and dispensary. The town also possesses an aided Punjābi Anglo-vernacular middle school. Outside the town is a large church. The municipality was created in 1867. The income and expenditure during the ten years ending 1902–3 averaged Rs. 4,500. In 1903–4 the income was Rs. 5,500, chiefly from octroi; and the expenditure was Rs. 5,400.

Narsapatam.—Subdivision and town in Vizagapatam District, Madras. *See* NARASAPATNAM.

Narsapur.—Subdivision, *tāluk*, and town in Kistna District, Madras. *See* NARASAPUR.

Narsāpur.—Former *tāluk* in Nizāmābād (Indūr) District, Hyderābād State, with an area of 537 square miles. The population in 1901, including *jāgīrs*, was 52,056, compared with 52,443 in 1891. The *tāluk* contained 139 villages, of which 6 are *jāgīr*; and Narsāpur (1,773) was its head-quarters. The land revenue in 1901 was 1·3 lakhs. In 1905 the *tāluk* was divided between Nirmal and a new *tāluk* of Kinwat in Adilābād District.

Narsinghgarh State.—A mediatized chiefship in Central India, under the Bhopāl Agency, lying between 23° 35′ and 24° 0′ N. and 76° 20′ and 77° 10′ E., but its territories are much intermingled with those of Rājgarh; total area, 741 square miles. It is situated in the section of Mālwā known as Umatwāra, so called after the Umat clan of Rājputs to which the chief of Narsinghgarh belongs. It is bounded on the north by the Indore, Khilchipur, and Rājgarh States; on the east by Maksudangarh and Bhopāl; on the west by Dewās and Gwalior; and on the south by Bhopāl and Gwalior.

Narsinghgarh is closely allied to Rājgarh. Both chiefs are descended from Dudājī, younger brother of Udājī of Rājgarh, who acted as minister to his brother. In 1661 Rāwat Mohan Singh succeeded to Rājgarh as a minor, the State being administered by his cousin Dīwān Ajab Singh of the Dudāwat branch, who was succeeded by his son Paras Rām. This arrangement, however, gave rise to constant differences between the parties of the Dīwān and the Rāwat, till in 1668 a crisis occurred which resulted in a division of the State between the two branches of the family. The partition was not at first completed by definite delimitation of territory, a system of intermixed rule over each village prevailing. Subsequently, in 1681, the territorial limits were defined; and Paras Rām, on receiving his share, left Pātan, his

former residence, and founded the town and State of Narsinghgarh. In the eighteenth century the chief succumbed to the Marāthās, and was obliged to make terms with Holkar and pay an annual sum of Rs. 85,000 (*Sālim shāhi*), in order to preserve his independence. In 1818, on the settlement of Mālwā by Sir John Malcolm, an agreement was mediated between the Narsinghgarh chief and the rulers of Indore, Dewās, and Gwalior, guaranteeing the regular payment of the sum due to Holkar and the receipt of Rs. 1,200 as *tānka* (cash-grant) from Sindhia, and of Rs. 5,102 from Dewās, in settlement of certain claims on the Shujālpur and Sārangpur *parganas*. In 1819 Dīwān Subhāg Singh became imbecile, and the management of the State was entrusted to his son Chain Singh, who, however, had a difference with the Political Agent, attacked the British forces at Sehore, and was killed in the engagement (1824). Subhāg Singh, who had recovered his health, was then again entrusted with the rule. He was succeeded by Hanwant Singh, who in 1872 received the hereditary title of Rājā and a salute of 11 guns. On his death in 1873, Holkar demanded payment of *nazarāna* (succession dues) from his successor, Pratāp Singh, but the claim was not admitted by the British Government. In 1880 Pratāp Singh abolished transit dues on salt passing through the State, in lieu of which a yearly cash payment of Rs. 618–12 is made. In 1884 he abolished all transit duties, except those on opium, and made a contribution of Rs. 56,000 towards the construction of the Biaora-Sehore road. He was succeeded in 1890 by his uncle Mahtāb Singh, who died childless and was followed, in 1896, by Arjun Singh, the present chief, selected by the British Government from the Bhāthkhera Thākur's family. He is being educated at the Mayo College at Ajmer. The chief bears the titles of His Highness and Rājā, and receives a salute of 11 guns.

The population of the State was: (1881) 112,427, (1891) 116,280, and (1901) 92,093, giving a density of 124 persons per square mile. During the last decade there was a decrease of 20 per cent., due to the severity of the famine of 1899–1900. Hindus number 82,822, or 90 per cent.; Animists, 4,816, or 5 per cent., of whom nearly half are Bhīls; and Musalmāns, 4,088, or 4 per cent. The State contains one town, NARSINGHGARH (population, 8,778), the capital; and 461 villages. The Mālwī dialect of Rājasthānī is in common use. The prevailing castes are Rājputs (8,500), Chamārs (7,000), Brāhmans (5,000), and Balais (4,800). Agriculture supports 45 per cent. of the population, and general labour 8 per cent. The soil consists mostly of the fertile black variety common to Mālwā. The total area of 741 square miles, of which 207 square miles, or 28 per cent., have been alienated in *jāgīrs*, is thus distributed: cultivated, 272 square miles, or 37 per cent., of which 17 square miles are irrigated; cultivable but uncultivated,

380 square miles, or 51 per cent.; forests, 2 square miles; and the rest waste. The principal crops are *jowār*, occupying 141 square miles, or 57 per cent. of the cropped area; cotton 27 square miles, wheat 20, maize 17, gram 14, and poppy 8.

The chief means of communication are the Agra-Bombay, the Biaora-Sehore, the Pachor-Khujner, and the Shujālpur-Pachor roads, with a total length of 55 miles metalled, of which 40 are kept up by the British Government and the rest by the State. British combined post and telegraph offices have been opened at Narsinghgarh and Pachor, and branch post offices at Khujner and Chhapera.

For administrative purposes the State is divided into four *tahsīls*, with head-quarters at Narsinghgarh, Pachor, Khujner, and Chhapera, each under a *tahsīldār*, who is magistrate and collector of revenue. The chief has full powers in all revenue, general, and civil judicial matters; in criminal jurisdiction his powers are those of a Sessions Court, heinous cases being dealt with by the Political Agent.

The normal income is 5 lakhs, of which 3·3 lakhs is derived from land, Rs. 36,000 from customs, Rs. 5,000 from excise, and Rs. 12,000 from opium. The expenditure amounts to about 4·5 lakhs, the principal heads being general administration (2·4 lakhs), chief's establishment (Rs. 12,700), and tribute (Rs. 58,600). Up to 1897, when the British rupee was made legal tender, the Bhopāl coinage was current. The incidence of land revenue demand is Rs. 3-2 per acre of cultivated land, and Rs. 1-2 per acre of total area. The State is the sole proprietor of the land, villages being leased out to farmers who are responsible for the assessed revenue of their holdings. The rates are fixed according to the quality of the soil, a higher rate being levied on irrigated land.

The army includes a regular force known as the Umat-Risāla, a body of 40 cavalry, who act as a body-guard to the chief, and also infantry. The irregulars act as police messengers and the like. There are 23 artillerymen with one serviceable gun.

The State contains 8 schools with 529 pupils, and the annual expenditure on education is Rs. 3,000. In 1901, 3·5 per cent. of the population, almost all males, were able to read and write. Four dispensaries are maintained, at an annual cost of Rs. 4,400. Vaccination is regularly carried out. Three surveys for revenue purposes have been made—in 1865, 1885, and 1898. The last survey was a complete plane-table survey, whereas the earlier surveys dealt only with cultivated land.

Narsinghgarh Town.—Capital of the State of the same name in Central India, situated in 23° 43′ N. and 77° 6′ E., 1,650 feet above the sea, 44 miles from Sehore. Population (1901), 8,778. It was founded by Paras Rām, first chief of Narsinghgarh, in 1681, on the site

of the village of Toplia Mahādeo. The town is most picturesquely situated on the edge of an artificial lake, with a fort and palaces on the heights above. A dispensary, a school, a jail, and British combined post and telegraph offices are situated in the town.

Narsinghpur State.—One of the Tributary States of Orissa, Bengal, lying between 20° 23′ and 20° 37′ N. and 84° 5′ and 85° 17′ E., with an area of 199 square miles. It is bounded on the north by a range of forest-clad mountains, which separate it from Angul District and the State of Hindol; on the east by Barāmbā; on the south and south-west by the Mahānadī river, which divides it from Khandparā and Daspallā; and on the west by Daspallā and Angul District. The State is reputed to have been founded 600 years ago by a Rājput, named Dharma Singh, who conquered two Khond chiefs named Narsingh and Poro. It has a revenue of Rs. 66,000, and pays a tribute of Rs. 1,450 to the British Government. The population increased from 33,849 in 1891 to 39,613 in 1901, the density being 199 persons per square mile. It contains 198 villages, the most important of which is KĀNPUR. Of the total population, all but 150 are Hindus. The most numerous castes are Chāsas (6,000) and Pāns (4,000). Narsinghpur is connected with Barāmbā by a road which is a continuation of that from Sankarpur in Dhenkānāl. Another road leads to Angul, and one to Hindol is under construction. The State maintains a middle vernacular, an upper primary, and 36 lower primary schools, and a charitable dispensary.

Narsinghpur District.—District in the Nerbudda Division of the Central Provinces, lying between 22° 37′ and 23° 15′ N. and 78° 27′ and 79° 38′ E., in the upper half of the Narbadā Valley, with an area of 1,976 square miles. On the north it is bounded by the Bhopāl State and by Saugor, Damoh, and Jubbulpore Districts; on the south by Chhindwāra; on the west by Hoshangābād; and on the east by Seonī and Jubbulpore. Nearly the whole District lies to the south of the Narbadā, occupying a stretch of 15 or 20 miles between the river and the northern range of the Sātpurā plateau. The Narbadā forms the northern boundary for a considerable length, and immediately beyond the river the southern scarp of the Vindhyan range extends like a line of cliffs almost along its banks. A small strip of territory lies to the north of the Narbadā. On the south of the District a broad belt of gravelly soil merges through woody borders into the lower slopes of the Sātpurā highlands. The hilly country itself is generally not more than three or four miles in width. Between the Sātpurās and the Narbadā lies the greater part of the District, in the first of the wide alluvial basins which, alternating with rocky gorges, give so varied a character to the river's course. The surface of the valley is covered by a deep layer

Physical aspects.

of black alluvial soil, which is famed for its fertility. The general elevation is about 1,100 feet above the sea, the fall in the course of the Narbadā within the District being very slight. During its passage through Narsinghpur the Narbadā receives the waters of several tributaries, principally from the south. Of these, the most important are the Sher and the Shakkar, with their respective affluents, the Māchārewā and Chitārewā. Other smaller rivers are the Dudhī and Soner, which form the western and eastern boundaries of the District, and the Bārūrewā. All these rise in the Sātpurā range on the southern border, and though their courses are short they fill with extraordinary rapidity. The passage of these streams through the soft alluvial soil produces a wide series of ravines on either bank, rendering the ground for some distance uncultivable, the most marked systems of ravines being on the Narbadā and Sher. The Hiran and Sindhor rivers join the Narbadā from the north.

The valley in the north of the District is covered with alluvium. The hilly country in the south is occupied by rocks referable partly to the Gondwāna and partly to the transition system.

The forests are not extensive, and are situated principally on the slopes of the Sātpurās along the south of the District, with a few patches on the northern border beyond the Narbadā. The principal tree, even in the forests, is the *mahuā* (*Bassia latifolia*); and the rest is mainly a scrubby growth of small teak, *achār* (*Buchanania latifolia*), *daman* (*Grewia tiliaefolia*), *sālai* (*Boswellia serrata*), *palās* (*Butea frondosa*), and similar shrubs and stunted trees. The open country is well provided with *mahuā* and other fruit-bearing or sacred trees.

Tigers are not numerous. Leopards and bears frequent the low hills. *Sāmbar* and *nīlgai* are met with in most of the forests, but spotted deer are scarce. Bison sometimes visit the south-western hills in the rainy months. The forests are singularly devoid of bird life. Quail are plentiful in certain tracts, as also are peafowl and sand-grouse; but there are very few water-birds.

The climate is generally healthy and very pleasant in the cold season. The annual rainfall averages 51 inches, and is more usually excessive than deficient, wheat on the heavy black soil being very liable to rust. Frosts sometimes occur in the cold season, but hail is rare.

History.

At the earliest period at which anything is known of its history, Narsinghpur formed part of the dominions of the Mandlā Gond dynasty. The stronghold of Chaurāgarh, twenty miles south-west of Narsinghpur town, on the crest of the outer range of the Sātpurā table-land, is intimately associated with the history of the Mandlā kings. Embracing two hills within its circle of defences, it is less a fort than a huge fortified camp; and the

vast scale of the whole work, its numerous tanks and wells excavated at so unusual an elevation, and the massive débris of the buildings, attest the lavish outlay incurred in its completion, and the importance which was attached to it as a royal stronghold. In 1564 Asaf Khān, Mughal general, invaded the Mandlā territories, defeated the Rānī Durgāvati, widow of the Gond Rājā Dalpat Shāh, and took by storm Chaurāgarh, finding, it is said, 100 jars of gold coin and 1,000 elephants. Three generations later, in the time of Rājā Prem Nārāyan, the Bundelā prince of Orchhā invaded the valley and took Chaurāgarh after a siege of some months, Prem Nārāyan being killed by treachery. Rānī Durgāvati and Prem Nārāyan are still celebrated in folk-lore. In 1781 the Gond dynasty was finally overthrown and the valley came under the rule of the Marāthā *Sūbahs* of Saugor, who were displaced by the Bhonslas fifteen years later. In November, 1817, on the first intelligence of the disturbances at Nāgpur and the treachery of Rājā Appa Sāhib, British troops were moved into Narsinghpur and the Marāthā garrison at Srīnagar was defeated. The fort at Chaurāgarh held out for some time, but was evacuated in May, 1818. The District subsequently came under British administration, and was augmented in 1826 by the temporary cession by Sindhia of the trans-Narbadā *parganas* of Chānwarpātha and Tendūkhedā, which finally became British territory in 1860. Since 1818 the tranquillity of the District has been twice disturbed. During the Bundelā rising of 1842 the rebels invaded Narsinghpur, receiving the tacit support of nearly all the landholders of Chānwarpātha, and plundered several villages, but were finally defeated and forced to recross the Narbadā. In 1857 the Saugor and Bhopāl mutineers entered Chānwarpātha on two occasions, and made isolated forays across the Narbadā. Except from two or three landholders in Chānwarpātha they met with no support, and were stubbornly resisted at Tendūkhedā, and by Rao Sūrat Singh Lodhī at his village of Imjhirā. The Deputy-Commissioner, Captain Ternan, took the field with two companies of irregular troops and some matchlockmen furnished by the Gond chiefs, and drove out the rebels. It is worth noticing that this officer had as early as February, 1857, submitted a report on the circulation of the *chapātis*, stating his belief that they portended an insurrection; but his warning was disregarded.

There are few archaeological remains of interest. Barehtā, 14 miles south-east of Narsinghpur town, formerly contained a number of sculptures, some of which have been brought to Narsinghpur and placed in the public gardens, while other sculptures are believed to have been taken to Europe, and little remains at Barehtā itself. An important place of pilgrimage in the District is Barmhān at the junction of the Narbadā and Warāhi rivers, while there are numerous

temples and flights of stone steps leading up to the north bank of the river. Dhilwar and Chānwarpātha contain the ruins of Gond forts.

Population. The population of the District at the last three enumerations was as follows: (1881) 365,173, (1891) 367,026, and (1901) 313,951. A small transfer of territory to Narsinghpur from Saugor was made in 1902, and the corrected totals of area and population are now 1,976 square miles and 315,518 persons. Between 1881 and 1891 the population was nearly stationary. In the last intercensal period the decrease was at the rate of 14 per cent. Deaths exceeded births in six years of the decade, and the District was severely affected by the famines of both 1897 and 1900. The District has three towns, NARSINGHPUR, GĀDARWĀRA, and CHHINDWĀRA; and 963 inhabited villages. The following statistics of population in 1901 have been adjusted on account of the transfer mentioned above:—

Tahsīl.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Narsinghpur .	1,106	2	533	150,305	136	−14·0	7,291
Gādarwāra .	870	1	430	165,213	190	−14·9	7,660
District total	1,976	3	963	315,518	160	−14·5	14,951

About 85 per cent. of the population are Hindus, 10 per cent. Animists, and nearly 4 per cent. Muhammadans. Practically the whole population speak the Bundelī dialect of Western Hindī, the Gonds having almost entirely abandoned their own language. Marāthī, Urdū, and Gondī are spoken by a few hundred persons each.

The principal landholding castes are Brāhmans (24,000), Rājputs (14,000), Baniās (9,000), Kurmīs (7,000), Lodhīs (30,000), Kaonrās (14,000), and Rāj Gonds. Brāhmans belong principally to Northern India, but there are also some Marāthā Brāhman landlords, who generally bear the title of *Pandit*. The Golāpūrabs form a local subcaste of Brāhmans, who have been settled in the District for a long time and are solely cultivators; they neither beg nor perform priestly functions. Most of the Rājputs belong to a local sub-caste called Gorai, and are of mixed descent. The principal cultivating castes are Lodhīs, Kurmīs, and Kaonrās. The Kaonrās profess to be descended from the Kauravas of the Mahābhārata, who after being defeated by the Pāndavas came and settled in Narsinghpur. They are certainly not Rājputs, and there is some reason for supposing them

to be a branch of the Ahīrs. The labouring classes are Chamārs (17,000) and Mehrās (15,000), who together form about 10 per cent. of the population; and Gonds, who number 35,000, or 11 per cent. These are all in very poor circumstances. The Gonds are comparatively civilized, but live from hand to mouth. Many of them have only a garden plot for spade cultivation, or a small holding of the poorest soil. They depend largely on *mahuā* flowers and other forest produce, and on the sale of head-loads of grass and fuel. About 62 per cent. of the population were returned as supported by agriculture in 1901.

Of the 359 Christians, 66 belong to the Anglican communion and 267 are Methodists. Native Christians number 319. The Hardwicke American Methodist Episcopal Mission has a station at Narsinghpur.

Agriculture.

The greater part of the cultivated area consists of black alluvial soil. The quality varies according to the lie of the land, ground which is undulating or cut up by ravines being the poorest. Below the Sātpurā Hills there is a belt of light sandy soil suited to the growth of rice. A somewhat peculiar system followed in the hill country is that of sowing several of the autumn crops together, such mixtures as *kodon*, *jowār*, and cotton, *til* and *arhar*, or rice, *jowār*, and *arhar*, with *urad* or *mūng* as a fourth ingredient in each case, being found in the same field. The cultivators hope that in such cases they will get a good return from one or two of the crops whatever the nature of the season may be; but such a heterogeneous mixture can scarcely be considered good agriculture. In recent years there have been heavy decreases in the acreage of wheat, gram, and *kodon*, partly counterbalanced by a rise in those of *masūr*, rice, and cotton.

More than 45 square miles are held wholly or partially free of revenue, and the remainder on the ordinary *mālguzāri* tenure. The following table gives the principal agricultural statistics for 1903-4, in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Narsinghpur	1,106	489	1	314	186
Gādarwāra	870	515	2	265	63
Total	1,976	1,004	3	579	249

No considerable extension of cultivation is now possible. Wheat, either sown singly or mixed with gram, covers 318 square miles, or 27 per cent. of the cropped area; gram, 176 square miles; *til*, 78; rice, 54; *jowār*, 33; and cotton, 50. The small millet *kodon* is mainly grown as a food-crop in the hilly tracts by Gond cultivators, and is not

exported. Only 7,000 acres are occupied by linseed. It is peculiarly liable to rust, and is therefore not a popular crop for heavy black soil, but the area under it was larger a few years ago than at present. The cultivation of cotton has recently increased. It is grown on the light soil along the banks of the Narbadā or mixed with other crops, and the out-turn is usually poor. Rice is raised mainly as a catch-crop in embanked fields before gram, or as a mixture with other crops.

The principal agricultural improvement is the embankment of wheat-fields to hold up water during the rains. This, however, is practised only in the eastern part of the District adjoining Jubbulpore, and the anticipation that it would gradually extend to the remaining area has not been fulfilled. Only about 2,500 acres were regularly embanked in 1893, but since then up to 1905 embankments have been constructed on an additional 13,000 acres. In places where the surface is sloping the field cannot be embanked on all sides, but a bank is run across the lower end to prevent scouring. About 78 square miles have small embankments of this type, or *bandhiās*. During the eleven years following 1893 only Rs. 17,000 was advanced under the Land Improvement Loans Act, and 1·9 lakhs under the Agriculturists' Loans Act.

Cattle are bred in the District, and are also imported from Chhindwāra, Nimār, Hoshangābād, and Saugor. The Narsinghpur cattle have no particular reputation. They are slow, but have the strength which is requisite for cultivation in the heavy black soil. The number of cattle was greatly reduced by mortality in the famines. Buffaloes are kept for breeding purposes and for the manufacture of *ghī*. There were formerly a considerable number of horses in the District; but the impoverishment of many landowners and the construction of good roads have rendered horse-breeding too expensive, and to a great extent destroyed the taste for it, the people generally preferring a bullock-cart to a horse, when the former method of locomotion is practicable.

Only about 2,000 to 2,500 acres are irrigated. Irrigation is almost entirely from wells, and is practically confined to sugar-cane and garden crops. There are about 1,100 irrigation wells.

The area of Government forest is 249 square miles, all of which is 'reserved.' The principal forests are on the Sātpurā range in the south of the District, and there are small patches north of the Narbadā on the Vindhyan range. Teak, *sāj* (*Terminalia tomentosa*), *khair* (*Acacia Catechu*), and bamboos are the principal trees. The revenue in 1903-4 was Rs. 20,000.

The coal-mines situated at Mohpāni, twelve miles from Gādarwāra at the foot of the Sātpurā Hills, are served by a branch line of railway. They have been worked since 1862, and the opening out of some fresh seams has recently been undertaken. The annual out-turn is now about 43,000 tons. The coal is of moderate quality. In 1904 the

mines were sold by the Nerbudda Coal and Iron Company to the Great Indian Peninsula Railway. Coal is also found in small quantities in the Sher and Shakkar rivers. There are iron mines at Tendūkhedā on the north of the Narbadā close to the base of the Vindhyan range, but they are worked only by native miners, or Lohārs. About 150 large and 70 small furnaces were working in 1895; but the returns for 1904 show only 8, and the industry is now nearly extinct, though the iron has a local reputation. The mines are mere open pits cut to the depth of about 30 feet through the black soil and underlying clay, and have to be re-excavated annually after the rainy season. Copper ores occur at Barmhān. They were worked for a time, and the band of rock in which they lie was found to be 6 feet thick, while the average yield of copper from some ores was 28 per cent.

Trade and communications.

Hand-weaving and dyeing were formerly carried on to a considerable extent, but the industries are suffering from the competition of machine-made cloth. Gādarwāra is the most important centre, while Singhpur and Amgaon have also considerable numbers of looms and dye-houses and Narsinghpur a few. Indigo is used in combination with other agents to produce the dark-green cloth called *amohwā*, padded coats of which are largely worn in the cold season. Chichlī has an industry of brass-workers, and brass vessels are also imported from Jubbulpore and Poona. Glass bangles are made at Nayākhedā and Bārha, and rude glass bottles for holding the sacred water of the Narbadā at Barmhān. A few Muhammadan butchers have settled at Gādarwāra and prepare dried meat. A ginning factory has lately been opened at Gādarwāra by a private company, and another at Chhindwāra.

Wheat has hitherto been the staple product of Narsinghpur District, forming about 50 per cent. of the total exports. Oilseeds, gram, and other grains are also exported to a less extent. *Ghī* is sent to Calcutta and Bombay, and hides and bones to Bombay. The exports of forest produce from Narsinghpur are not considerable, but those of the adjoining tracts of Chhindwāra are brought to Bābai station. The imports are principally cotton piece-goods, salt, sugar, kerosene oil, tobacco, and articles of hardware. Rice is imported by road from Seonī and Chhindwāra, salt comes from Gujarāt, and *gur* or unrefined cane-sugar from Lucknow and Patna. Three annual fairs are held—at Barmhān, Barehtā, and Sānkal. A large amount of traffic in household and other commodities takes place at the Barmhān fair.

The Jubbulpore line of the Great Indian Peninsula Railway passes through the centre of the District from west to east, having a length of 75 miles and 8 stations within its limits. There is also a branch line of 12 miles from Gādarwāra to the Mohpāni coal-mines. The feeder roads to Gādarwāra, Kareli, Chhindwāra, and Narsinghpur are

the most important trade-routes. Previous to the opening of the railway to Saugor, Karelī was a place of considerable importance, as it was the station for Saugor, with which it is connected by a metalled road crossing the Narbadā at Barmhān. It now only retains the trade of the southern part of the Rehlī *tahsīl* and the centre of Narsinghpur. A metalled road is projected from Narsinghpur town to Lakhnādon in Seonī District, and has been constructed for 17 miles; but it passes through poor country and there is not much traffic on it. The old road from Jubbulpore to Bombay runs through the District, but as it adjoins and is parallel to the railway, it is no longer of any importance. The length of metalled roads in the District is 79 miles, and of unmetalled roads 135 miles. The expenditure on maintenance in 1903-4 was Rs. 33,000. The Public Works department maintains 94 miles of the more important roads and the District council the remainder. There are avenues of trees on 117 miles.

Famine.

The earliest scarcities of which accounts are available resulted rather from political disturbances than climatic causes. War and its effects caused distress in the upper Narbadā Valley during the years 1771, 1783, and 1809. It is recorded that in 1771 wheat sold in Narsinghpur at 5 seers to the rupee. In 1832-3 severe distress occurred, owing to a poor harvest caused by excessive, followed by deficient, rain. The failure of 1868-9 was not severe in Narsinghpur. In 1894 and 1895 the spring crops were spoilt by excessive winter rain. A little relief was given by opening works in 1895, and the forests were thrown open. In 1895 the rains stopped prematurely and the harvest was only 60 per cent. of normal. This was followed by a total failure of the crops in 1896-7. Famine prevailed throughout the year 1897, when 59,000 persons, or 16 per cent. of the population, were on relief in June. The total expenditure was 10 lakhs, the principal form of relief consisting of road works. In 1899-1900 two-fifths of a normal crop were obtained, and the District was not severely distressed. The expenditure was 1·5 lakhs, and some useful work was done in the eradication of *kāns* grass (*Saccharum spontaneum*) and the construction of field embankments.

Administration.

The Deputy-Commissioner is aided by three Assistant or Extra-Assistant Commissioners. For administrative purposes the District is divided into two *tahsīls*, each of which has a *tahsīldār* and a *naib-tahsīldār*. The Forest officer usually belongs to the Provincial Service.

The civil judicial staff consists of a District and a Subordinate Judge, and a Munsif at each *tahsīl*. The Divisional and Sessions Judge of the Nerbudda Division has jurisdiction in Narsinghpur. The crime of the District, which was serious a few years ago, is now petty. Civil work is very heavy, and the people are noted for their fondness

for litigation. Suits between landlord and tenant and mortgage suits furnish the largest number of cases.

Under the Marāthā revenue system, villages were let out to the highest bidder, and any rights or consideration which the village headmen may have enjoyed in the past were almost entirely effaced. No legal status was given to tenants, and the older cultivators were protected only by the custom that, so long as the annual rent demanded was paid, their tenure was hereditary and continuous. During the period of Marāthā rule the District was severely rack-rented, every possible device of illegal exaction being employed to raise money; but the effect of this oppressive administration was largely counterbalanced by the fact that the considerable garrisons maintained at Srīnagar and Chaurāgarh and the court of the local governor afforded a ready market for produce. These facts were disregarded when the District first came under British administration, and in consequence the attempts made to collect the nominal demand under the Marāthās proved a disastrous failure. The annual demand at cession was 6·67 lakhs, and twenty years afterwards it had fallen to 4 lakhs. In 1836 a twenty years' settlement was concluded, and the revenue fixed at 3·47 lakhs. The next revision was delayed for some years owing to the Mutiny, and was completed in 1864 by Mr. (Sir Charles) Grant, whose settlement report is one of the most interesting publications relating to the Central Provinces. The revenue was raised to 4·22 lakhs, an increase of 27 per cent., the settlement being made for thirty years. During its currency Narsinghpur, like other Districts at this period, prospered greatly. The cropped area increased by 10½ per cent., and there was a rise of 60 per cent. in the price of grain. A new settlement was concluded in 1894, at which the demand was raised to 6·42 lakhs, or by 50 per cent. Some temporary remissions of land revenue have been made since the famines, in consequence of the agricultural deterioration which resulted from them. The term of the revised settlement varies from fifteen to seventeen years, a shorter period than the one now generally prescribed of twenty years having been adopted, in order to produce a regular rotation of District settlements. The average incidence of revenue per acre of cultivation was R. 0–15–3 (maximum Rs. 1–6–8, minimum R. 0–8–6), while that of the rental was Rs. 1–11–7 (maximum Rs. 2–13, minimum R. 0–14–3).

Collections on account of land revenue and revenue from all sources are shown below, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	4,22	4,21	7,01	6,23
Total revenue . .	6,39	7,24	9,46	8,48

Local affairs, outside municipal areas, are managed by a District council and two local boards each having jurisdiction over one *tahsīl*. The income of the District council in 1903-4 was Rs. 78,000. The expenditure was mainly on public works (Rs. 25,000) and education (Rs. 30,000). NARSINGHPUR, CHHINDWĀRA, and GĀDARWĀRA are municipal towns.

The force under the District Superintendent of police consists of 339 officers and men, including 3 mounted constables, besides 1,0[illegible] village watchmen for 966 inhabited towns and villages. Narsinghpur town has a District jail, with accommodation for 170 prisoners, including 13 females. The daily average number of prisoners in 1904 was 89.

In respect of education the District occupies the fourth position in the Province, nearly 5 per cent. of the population (9·4 males and 0·3 females) being able to read and write. The proportion of children under instruction to those of school-going age is 13 per cent. Statistics of the number of pupils are as follows: (1880-1) 4,334; (1890-1) 6,062; (1900-1) 5,926; and (1903-4) 6,110, including 554 girls. The educational institutions comprise two English and six vernacular middle schools, and 93 primary schools. The expenditure on education in 1903-4 was Rs. 49,000, of which Rs. 43,000 was derived from Provincial and Local funds and Rs. 4,000 from fees.

The District has 7 dispensaries, with accommodation for 98 in-patients. In 1904 the number of cases treated was 50,813, of whom 571 were in-patients, and 1,879 operations were performed. The expenditure was Rs. 10,000, of which the greater part was provided from Provincial and Local funds.

Vaccination is compulsory only in the municipal towns of Narsinghpur, Gādarwāra, and Chhindwāra. The number of persons successfully vaccinated in 1903-4 was 59 per 1,000 of the District population, a high proportion.

[C. Grant, *Settlement Report* (1866); E. A. De Brett, *Settlement Report* (1895); R. V. Russell, *District Gazetteer* (1906).]

Narsinghpur Tahsīl.—Eastern *tahsīl* of Narsinghpur District, Central Provinces, lying between 22° 37′ and 23° 13′ N. and 79° 1′ and 79° 38′ E., with an area of 1,106 square miles. The population in 1901 was 148,738, compared with 172,801 in 1891. In 1902, 11 villages were transferred to the *tahsīl* from Saugor District, and the adjusted population is 150,305. The density is 136 persons per square mile. The *tahsīl* contains two towns, NARSINGHPUR (population, 11,233), the head-quarters of the *tahsīl* and District, and CHHINDWĀRA (4,216); and 533 inhabited villages. Excluding 186 square miles of Government forest, 61 per cent. of the available area is occupied for cultivation. The cultivated area in 1903-4 was 489 square miles. The demand

for land revenue in the same year was Rs. 3,31,000, and for cesses Rs. 31,000. The *tahsīl* consists roughly of a belt of land near the Narbadā river, where the soil has been impoverished by the action of drainage and much cut up into ravines; a rich black-soil tract behind this, and then some sandy and stony land leading up to the Sātpurā Hills on the south.

Narsinghpur Town.—Head-quarters of the District and *tahsīl* of the same name, Central Provinces, situated in 22° 57′ N. and 79° 13′ E., on the Great Indian Peninsula Railway to Jubbulpore, 564 miles from Bombay. Population (1901), 11,233. It was formerly called Chhotā-Gādarwāra, and the name of Narsinghpur was given when a temple of Narsingh (the man-lion incarnation of Vishnu) was erected about 100 years ago. Narsinghpur proper stands on the west bank of the small river Singrī; and the houses on the eastern bank are really situated in a separate town called Kandelī, but are included within the municipality of Narsinghpur. The Singrī, though of absolutely insignificant size, is liable to sudden floods; and in 1891 it submerged the town and civil station, and washed away numerous houses, though the exertions of the civil officers prevented any loss of life. It has been dammed to afford a water-supply to the town. Narsinghpur was created a municipality in 1867. The municipal receipts during the decade ending 1901 averaged Rs. 15,000. In 1903–4 they were Rs. 17,000, mainly derived from octroi, but including a grant of Rs. 4,000 from Provincial funds for education. With the exception of the export of timber from the Chhindwāra forests, there has not hitherto been much trade at Narsinghpur, the adjoining station of Karelī being a more important centre. But since the opening of the railway to Saugor, Karelī has been diminishing and Narsinghpur increasing in importance. Hand-weaving and dyeing and book-binding are among the local handicrafts. The town contains a printing press with Hindī and English type, which issues three monthly vernacular periodicals. It has an English middle and other schools, and three dispensaries. A mission station of the American Methodist Episcopal Church has been established here.

Narsipur.—*Tāluk* and town in Hassan District, Mysore. *See* HOLE-NARSIPUR.

Narsipur.—*Tāluk* of Mysore District, Mysore. *See* TIRUMAKŪDAL-NARSIPUR.

Nārukot.—Petty State in REWĀ KĀNTHA, Bombay.

Narwal.—Eastern *tahsīl* of Cawnpore District, United Provinces, conterminous with the *pargana* of the same name, formerly called Sārh Salempur. It lies south-west of the Ganges, between 26° 8′ and 26° 25′ N. and 80° 14′ and 80° 34′ E., with an area of 218 square miles. Population fell from 98,784 in 1891 to 92,860 in 1901, the

decrease being greater than in any other *tahsīl* in the District. There are 170 villages and one town, Narwal (population, 2,214), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 2,20,000, and for cesses Rs. 35,000. The density of population, 426 persons per square mile, is below the District average. From the banks of the Ganges rises a high cliff of poor soil; but the land is more fertile in the centre of the *tahsīl*, which is drained by the Pāndū, and in the south, where the Rind flows through a well-cultivated area. In 1903–4 the area under cultivation was 116 square miles, of which 45 were irrigated. Wells supply two-thirds of the irrigated area, and the Cawnpore and Fatehpur branches of the Lower Ganges Canal most of the remainder.

Narwāna.—Southern *tahsīl* of the Karmgarh *nizāmat*, Patiāla State, Punjab, lying between 29° 23′ and 29° 51′ N. and 75° 58′ and 76° 27′ E., in the Bāngar south of the Ghaggar river, with an area of 575 square miles. The population in 1901 was 117,604, compared with 108,913 in 1891. It contains 133 villages, of which Narwāna is the head-quarters. The land revenue and cesses in 1903–4 amounted to 1.8 lakhs.

Narwar Zila.—A district in the Gwalior State, Central India, lying between 24° 32′ and 25° 54′ N. and 77° 22′ and 78° 32′ E., with an area of 4,041 square miles. The greater part is cut up by a succession of jungle-covered ridges which strike from north-east to south-west across the district, but the portion west of the arm of the Vindhyan range lying in the east is a level plain. The soil of the valleys is of considerable fertility, being formed of detritus washed off the hills. To the east, round Karera village, the soil is of the rocky and poor class common to the gneiss area. The chief rivers are the Sind, Pārbati, and Betwā, while of smaller streams the Kunu, Lesser Pārbati, Ahīr, and Mahuār are the most important. The population in 1901 was 398,361, giving a density of 131 persons per square mile. The district contains two towns, CHANDERĪ (population, 4,093) and NARWAR (4,929); and 1,298 villages. The head-quarters are at SĪPRĪ. It is divided into four *parganas*, with head-quarters at Sīprī, Pichor, Kolāras, and Karera. The land revenue is Rs. 6,58,000.

Narwar Town.—Town in the district of the same name in Gwalior State, Central India, situated in 25° 39′ N. and 77° 54′ E. Population (1901), 4,929. The place is traditionally supposed to be the home of Rājā Nala of Naishadha, whose romantic love for Damayantī, related in the Mahābhārata, is familiar to every Hindu. Cunningham identified Narwar with Padmāvatī, which, according to the Purānas, was one of the cities held by the nine Nāgas. Coins bearing the name of Ganapati, who is mentioned as a Nāga king in Samudra Gupta's inscription at Allahābād, have been found here. The history of

Narwar has always been closely connected with that of Gwalior. In the middle of the tenth century both places fell to the Kachwāha Rājputs. These were succeeded by Parihārs in 1129, who held possession until 1232, when they were expelled by Altamsh. The next mention of the fort is in 1251, when it was in the hands of Chāhada Deva, who surrendered it to Nāsir-ud-dīn. After the invasion of Tīmūr, Narwar fell to the Tonwars, who held it until 1507, when it was taken, after a twelvemonth's siege, by Sikandar Lodī. This ruler gave the fort to Rāj Singh, a Kachwāha, thus restoring the fortress to its original owners. Under Akbar it was the head-quarters of the Narwar *sarkār* of the *Sūbah* of Mālwā, and Abul Fazl writes of ancient Hindu temples still standing in a part of the fort. Except for a temporary loss of possession in the time of Shāh Jahān, the Kachwāhas held Narwar as feudatories of Delhi up to the nineteenth century, when it was taken by Sindhia, to whom it was finally guaranteed by the Allahābād treaty of 1805.

The old fort is picturesquely situated on the steep scarp of the Vindhyas, 400 feet above the plain, and 1,600 above the level of the sea. The walls have a circuit of above 5 miles, and to the north lies a further portion enclosed by high walls, containing the shrine of Shāh Madār, a Muhammadan saint. A gentle ascent leads to the Alamgīri Darwāza, from which a steep flight of steps gives access to the summit through three more gateways. The fort is purely Muhammadan in character, but the numerous fragments of sculpture and architectural ornament show that in the flourishing days of Hindu sovereignty it was probably second only to Gwalior in the magnificence of its temples and other edifices. Sikandar Lodī remained here for six months, breaking down temples and building mosques, and effectually removed any edifices of importance. Among Hindu relics of later days is a gun which belonged to Sawai Jai Singh of Jaipur, bearing the date 1696. A small Roman Catholic cemetery in the fort contains a chapel and several tombs, one of which is dated 1747. This was no doubt the burial-place of the European gunners so frequently employed in native armies during the eighteenth century.

The town lies at the north-eastern foot of the hill on which the fort stands, near a bend in the Sind river, and is enclosed by a wall with three gates. Once a flourishing place on a route between Delhi and the Deccan, it has decayed rapidly since the construction of new roads and railways has carried traffic elsewhere. Just outside the walls stands a pillar on which are inscribed the names of the Tonwar chiefs of Narwar, a large *baorī*, and two fine Muhammadan bridges over the Sind. A curious *satī* stone recalls the memory of two wives of a family priest to Rājā Gaja Singh who, on hearing of their husband's death in a battle in the Deccan, burned themselves together with his

scarf. Narwar formerly produced a considerable quantity of crude iron, smelted from the magnetic iron ore abounding in the neighbourhood; but this industry has now decayed. A State post office, a school, a dispensary, and a police station are situated here.

Narwar State (1).—Mediatized chiefship in the Gwalior Residency, Central India. *See* PĀRON.

Narwar State (2).—*Thakurāt* in the MĀLWĀ AGENCY, Central India.

Nasarpur.—Town in the Tando Alāhyār *tāluka* of Hyderābād District, Sind, Bombay, situated in 25° 31′ N. and 68° 39′ E. Population (1901), 4,511. Nasarpur was formerly famous for its weaving industries, and cotton goods are still manufactured in some quantity on hand-looms; but the trade of the place is insignificant. The town is of very ancient date, and is said to have been built in A.D. 989. The municipality was constituted in 1860, and had an average income of about Rs. 6,000 during the decade ending 1901. In 1903-4 the income was Rs. 6,000. The town contains a courthouse, a dispensary, and a boys' school.

Nāsik Agency, The.—This consists of a single petty State lying in the north-west corner of Nāsik District, Bombay. *See* SURGĀNA.

Nāsik District (*Nasica* of Ptolemy).—District in the Central Division of the Bombay Presidency, lying between 19° 35′ and 20° 53′ N. and 73° 15′ and 74° 56′ E., with an area of 5,850 square miles. It is bounded on the north and north-east by the District of Khāndesh; on the south-east by the Nizām's Dominions; on the south by Ahmadnagar; and on the west by Thāna District, the territories of Dharampur, Surgāna, and the Dāngs.

Physical aspects.

With the exception of a few villages in the west, the whole District is situated on a table-land at an elevation of from 1,300 to 2,000 feet above the sea. The western portion, from north to south, called Dāng, is generally much divided by hills and intersected by ravines, and only the simplest kind of cultivation is possible. The eastern portion, called Desh, is open, fertile, and well cultivated. Except the line of the Western Ghāts, which run north and south, the general direction of the hills is from west to east, the higher portions being in the west. The SĀTMĀLA or Chāndor range of hills forms the watershed of the District, dividing the valley of the Girnā from that of the Godāvari. It stretches from Peint east into the Nizām's Dominions, and is crossed by several fair passes. The most important of these, which takes its name from the range, is traversed by a first-class bridged and metalled road. East of Rahudi, the Chāndor range ceases to be a barrier. Its chief peak, DHODAP, is 4,741 feet high. Several of the minor peaks are of religious and historic interest. A low

range separates Dindori from Nāsik. On its peaks are the once celebrated fort of Rāmsej and the Jain cave-temples of Chāmbhār Lena (*see* NĀSIK TOWN). The other important ranges are the Selbāri and Dolbāri, varying from 3,000 to 4,000 feet. All streams of any size to the south of the Chāndor range are tributaries of the Godāvari, the principal of these being the Dārna, Kadva, Deo, and Maralgin. In the north of the watershed the Girnā and its tributary the Mosam flow through fertile valleys into the Tāpti. The District contains many hill forts, the scenes of engagements during the Marāthā Wars.

Nāsik District is entirely occupied by the Deccan trap formation, which appears at the surface except where hidden under recent soil or concealed beneath some comparatively limited outcrops of pliocene or pleistocene gravels. The Deccan trap consists as usual of successive flows of basalt, with a slight dip towards the east, which once accumulated to a thickness of several thousand feet. Denudation acting uninterruptedly during a protracted series of geological ages has removed the greater part of this enormous mass; and the latest flows are now reduced to small disconnected remnants forming the peaks of lofty hills of which the summits indicate the former level of the land. Some of the basalt flows are of great thickness and vast horizontal extent, and the same flow can often be recognized in several of the detached hills which denudation has isolated from one another. Over most of the low-lying portions of the District the surface of the basalt has weathered into fertile black soil. The red laterite which caps so many flat-topped hills of the Sahyādri range farther south has been almost all worn away within Nāsik District. The beds of clay and conglomerate that form high cliffs along the banks of the Godāvari at Nandur Madmeshwar must have been deposited when the headwaters of the river flowing eastwards were situated to the west of their present sites.

In these gravels have been found remains of hippopotamus, and the skull and several bones of a gigantic elephant (*E. namadicus*), a variety of *E. antiquus* which flourished in Europe towards the close of the pliocene and commencement of the pleistocene period. In the so-called older alluvium of the Narbadā, which is probably pliocene in age, the remains of *E. namadicus* occur, together with those of *E.* (*Stegodon*) *ganesa-insignis*, a Siwālik species. A well near Bhadra Kālī's temple in Nāsik, and another near the Nāsik jail, are remarkable for the presence of nitrates in large quantities.

The botanical features differ but little from those of adjacent Districts. There is the same luxuriance of vegetation on the Western Ghāts and the same bare country on the Deccan side. The mango and *babūl* are the commonest trees. Along the roadsides grow the *pīpal*, banyan, *pipri*, *umbar*, *karanj*, tamarind, mango, *nīm*, *jāmbul*,

and *babūl*. The *Clematis triloba*, *Heylandia*, *Pulicaria*, *Indigofera*, *Impatiens*, *Exacum*, *Canscora*, and *Cyathocline* flower in most parts of the District. The neighbourhood of Nāsik town provides good grapes.

Of wild animals, leopards, antelope, and spotted deer are fairly common. Tigers are only occasionally met with.

The climate of Nāsik town and of the whole of the west of the District is the best in the Deccan. It varies in different parts, but on the whole presents greater extremes of heat and cold in the east than in the west. In January extreme cold and in April extreme heat are experienced. During the rest of the year, constant breezes from the west and south-west equalize the temperature. In 1903 the temperature varied from a minimum of 50° in February to a maximum of 105° in April. The annual rainfall at Nāsik town averages 29 inches, while at Igatpuri it is 133. The only other tract with a considerable rainfall is Peint, where the average is 87 inches. At other places the rainfall in 1903 varied from 20 inches at Mālegaon to 31 inches at Dindori.

History.

From the second century B.C. to the second century A.D. the District was under rulers, notably the Andhras, who patronized Buddhism, and some of whom are supposed to have had a capital at Paithan, 110 miles south-east of Nāsik. Among other early Hindu dynasties were the Chālukyas, the Rāthors, and the Chāndor and Deogiri Yādavas. The Muhammadan period lasted from 1295 to 1760, during which the District was successively under the viceroys of Deogiri (Daulatābād), the Bahmanis of Gulbarga, the Nizām Shāhis of Ahmadnagar, and the Mughals of Delhi, when it formed part of the *Sūbah* of Aurangābād. The Marāthā ascendancy lasted from 1760 until 1818, when the British power crushed the last of the Peshwās. Since then twice only has the peace of the District been disturbed—once in 1843, when serious breaches of order arose on the slaughter of a cow by Europeans in Nāsik town; and again in 1857, when some Rohillas, Arabs, and Bhīls gathered under the outlaw Bhāgojī.

The town of Nāsik is a place of great antiquity and sanctity, being associated with the legend of Rāma. The important cave-temples are the Buddhistic caves known as Pāndu Lena and the Jain caves of Chāmbhār (*see* NĀSIK TOWN), and those of Ankai and of Tringalvādi near Igatpuri. Nāsik has now a large number of temples, mostly dating from the eighteenth century, and not remarkable for their architectural beauty. The temple of Govindeshwar in SINNAR forms a strong contrast to the smaller and richly carved temples of Lakshmī Nārāyan at Pedgaon in Ahmadnagar District, being adorned chiefly with bands and panels of arabesque and other decoration, instead of figure sculpture. The shrine of Aieshwara in the north-

west of the town of Sinnar is the remains of a Dravidian temple. The Govindeshwar group is the finest collection of mediaeval temples in the Deccan. The porch of the Jogeshwar temple at Devalana in Bāglān is elaborately decorated, though much damaged. An immense hoard of silver coins of the Western Satraps was found in the District in 1906.

Hill forts, of which the District contains thirty-eight, may be divided into two classes: those on the main range or on the eastern spurs of the Western Ghāts, and those on the Chāndor range in the centre of the District. There are twenty-three Western Ghāt forts, the chief being GALNA ANJANERI, TRIMBAK, KULANG and ALANG, and KALSŪBAI. Fifteen forts lie on the Chāndor range, including ANKAI, CHĀNDOR, and DHODAP. SAPTASHRING or Chatarsingi, one of the principal hills in the Chāndor range, is not fortified because it is sacred to the Saptashring goddess. The Nāsik hill forts bear a great likeness to one another. They are built on isolated hills rising like islands from the plateau, or on peaks connected by low narrow necks. Each hill is capped by a mass of rock scarped by nature, the crest being surrounded with walls pierced by massive gates at accessible spots. Besides the walls and gates, the only work required of man was the construction of cisterns to hold water, and flights of steps. Of the origin of these forts there is no authentic history. Report ascribes the construction of most of them to Sivajī; but many of them undoubtedly existed before his time, and were the works of the early Hindu rulers. Thus, in 808, Mārkinda fort appears to have been an outpost of a Rāshtrakūta king. During the Mughal ascendancy the Muhammadans became the masters of the forts, and have left traces of their handiwork in Saracenic arches, inscriptions, and tombs.

Population.

The number of towns and villages in the District is 1,649. At the last four enumerations the population was: (1872) 737,685, (1881) 781,129, (1891) 843,496, and (1901) 816,504. The decrease in 1901 was due to famine, which affected the entire District. The distribution in 1901 of the population into twelve *tālukas* is shown in the table on next page.

The chief towns are: NĀSIK, the head-quarters, MĀLEGAON, YEOLA, IGATPURI, SINNAR, MANMĀD, NĀNDGAON, CHĀNDOR, and TRIMBAK. The average density is 140 persons per square mile. Nāndgaon, with only 87, is the most thinly populated *tāluka*. Classified according to religion, Hindus formed 93 per cent. of the total, Musalmāns 5 per cent., Jains one per cent.; and Christians numbered 2,935. The vernacular of the District is Marāthī.

The establishment of Marāthā power attracted many Brāhmans to the District. These, numbering 27,000, are mainly Deshasths (21,000).

The Yajurvedi Deshasths are the priestly class of the holy cities Nāsik and Trimbak. Marāthās (163,000) and Marāthā Kun (139,000) occupy the western portions, and are in general skil and successful cultivators. The more primitive Kolīs (75,000), fou along the Western Ghāts, are hardy and active. Formerly of u settled habits, of late years they have taken peacefully to agricultur pursuits. Other castes of importance are Bhīls (52,000), Vanjā

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Bāglān	601	...	156	64,645	108	− 1	2,636
Mālegaon	777	1	146	96,707	124	+ 12	3,413
Kalvān	494	...	188	53,616	109	− 11	1,685
Peint	432	...	227	53,392	124	− 10	508
Dindori	532	...	126	66,401	125	− 20	2,052
Chāndor	377	2	107	55,968	148	+ 9	2,584
Nāndgaon	435	1	88	37,691	87	+ 12	1,457
Nāsik	470	3	135	96,872	206	− 6	7,364
Niphād	415	...	119	92,791	[illegible]	+ ·5	4,326
Yeola	410	1	119	56,58[illegible]	38	− 14	3,752
Sinnar	514	1	101	75,375	147	+ 3	3,017
Igatpuri	393	1	127	66,462	169	− 4	2,381
District total	5,850	10	1,639*	816,504	140	− 3	35,175

* The Agricultural department's returns give the total number of villages as 1,695.

(31,000), Mālīs (28,000), Thākurs (17,000), and Vārlis (9,000). Bh live a wandering life in the Dāng or are settled in the richer pa of the Desh, where they do duty as village watchmen, residing hamlets, known as Bhīlvādas, close to the village site. Telis (o pressers) number 11,000, Dhangars (shepherds and blanket-weave 15,000. Of the depressed classes, 73,600 are Mahārs or village menia Of the total population, 59 per cent. live by agriculture, 9 per cent. general labour, and 2 per cent. by mendicancy. It is characteristic the population to collect into small compact villages. The inhal tants of the villages at the foot of the Western Ghāts are a great extent migratory. Their poor lands seldom yield crops f more than two years in succession; and often in the hot season their stock of grain running low—they are compelled to retire to t forest and support themselves by felling and carrying timber, feedi on fish, berries, and even roots. The Musalmāns (44,000) are near all of foreign origin, and are for the most part settled in the towns.

Of the 1,780 native Christians in 1901, 940 belonged to t Anglican communion and 722 were Roman Catholics. The Chr tian village Sharanpur, in the immediate vicinity of Nāsik, which w

founded by the Rev. W. S. Price of the Church Missionary Society in 1854, contains an orphanage, mission houses, schools, and workshops, built upon land granted by Government. For twenty-two years before the establishment of a separate village there was a Christian school and orphanage in Nāsik town. In 1865 Dr. Livingstone visited the settlement, and took with him to Africa several rescued African slave-boys who were being educated there. The orphanage contained 200 boys and 129 girls in 1905, and is equipped for the teaching of carpentry, smiths' work, and printing. The Church Missionary Society has branches at Mālegaon, Manmād, Nāndgaon, Deolāli, and Igatpuri, and maintains 14 vernacular schools, of which 7 are for boys, 6 for girls, and one is for both sexes, and 5 Anglo-vernacular schools, of which one is for girls. The number of pupils in these schools in 1905 was 969. The Zanāna Mission maintains a hospital and a small orphanage at Nāsik, and a home for native girls at Manmād.

Agriculture.

The soil may be divided into four classes: the reddish-black mould along rivers; a light black soil higher up; a brown soil, stiffer and shallower, found on the higher lands near the Ghāts; and highest and lightest of all, light brown or red, often strewn with boulders and mixed with lime. A second crop is not often raised. Manure is invariably used for all garden crops, but rarely for others.

The District is mainly *ryotwāri*, but contains *inām* lands covering 438 square miles. The chief statistics of cultivation in 1903–4 are shown below, in square miles:—

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Foress.
Bāglān	601	320	10	17	188
Mālegaon	777	485	9	16	191
Kalvān	494	214	5	22	150
Peint	432	,166	...	96	145
Dindori	532	377	12	30	87
Chāndor	385	294	12	4	37
Nāndgaon	435	214	1	8	164
Nāsik	470	329	12	10	67
Niphād	412	344	15	3	6
Yeola	410	313	6	2	49
Sinnar	514	390	15	2	55
Igatpuri	394	278	...	4	84
Total	5,856*	3,724	97	214	1,223

* Of this total, which is based upon the most recent information, statistics are not available for 142 square miles.

Bājra, the staple food of the people, covers an area of 1,099 square miles; it is sown with a mixture of pulses. Wheat (393 square miles) is grown largely in the central and southern *tālukas*; it is a fine grain, hard and white. *Jowār* occupies 161 square miles. Rice and *nāgli*

are grown on hill lands. Of pulses, the chief are *kulith* (145 square miles), gram (95), and *tur* (32). Oilseeds of various kinds occupy as much as 508 square miles. Of these, linseed is especially important; the area of *khurāsni* or niger-seed is usually larger, but this crop is not in demand for export. Cotton occupies an increasing area (111 square miles in 1903–4), especially in Mālegaon, and tobacco of inferior quality is raised in small quantities over the whole District. Much care is devoted to the cultivation of sugar-cane. Among garden products, three varieties of the vine have long been grown by Nāsik Kunbīs and Mālīs. Guavas, potatoes, and ground-nuts, and, in selected tracts, the betel-vine are also cultivated. The Bāglān *tāluka* is specially noted for its garden cultivation. Rice and hill-millets are the staples of the Dāng, with *khurāsni*, which is grown in rotation with the millets. The usual rotation is *nāchni*, *sāva*, and *khurāsni*. After the third year's crop has been reaped, the land lies fallow for several years. In Peint the area of land prepared for rice is comparatively small. Here cultivation is backward, and little labour has been spent on embanking land for rice.

About 1839 Mr. Grant obtained from Government a grant of [illegible]4 acres of land near Nāsik rent free for five years for agricultural experiments. Potatoes of good quality were successfully grown and distributed among local husbandmen, who soon became alive to the value of the crop. In addition to supplying local wants, Nāsik potatoes found their way to the Mālegaon and Mhow cantonments. Besides introducing potatoes Mr. Grant brought many grass seeds from France, Italy, and Malta. Indigo and upper Georgian green-seeded cotton and Bombay mango-trees and coffee plants were also tried, but all failed. Mauritius sugar-cane, peas, and European vegetables were grown to a considerable extent, and the seeds distributed among the people. Large advances have been made to cultivators under the Land Improvement and Agriculturists' Loans Acts, amounting during the decade ending 1904 to 14½ lakhs, of which 9·37 lakhs was advanced between 1899–1900 and 1901–2.

One pony stallion is maintained for horse-breeding purposes at Mālegaon by the Civil Veterinary department. Nāsik possesses a local breed of bullocks which, though small, are fit for agricultural work and cost from Rs. 20 to Rs. 200 per pair. Other breeds are the Surti, Varhādi, Kilhāri, Mālvi, and Gāvrāni. Of these the Kilhāri, from Indore, are trotting bullocks, too small for field-work. Buffaloes are used for ploughing, heavy draught-work, and water-carrying. Sheep are of two kinds, Gairāni and Harāni, the latter being distinguished by a short muzzle. Professional shepherds use the wool for weaving, the bones for sickle-handles, and the skins for drums. Of goats, the Nimār variety with long twisted horns is far more valuable than the small

local breed. In Sinnar, Yeola, and other level tracts small ponies, useful for pack-carrying, are bred.

Irrigation by wells and dams has been long in vogue, and the irrigated area is now considerable, amounting to 97 square miles. The areas irrigated from various sources are: Government channels and canals, 27 square miles; wells, 52 square miles; and other sources 18 square miles. Among larger works are the Kadva river works and the Parsul tank. The former, which commands 63 square miles, includes the Pālkhed canal in Dindori and Niphād, opened in 1873, supplying 3 square miles; the Vadāli canal in Niphād, an old scheme improved and enlarged in 1868, supplying 391 acres; and the Ojhar Tāmbat, also an old work in Dindori and Niphād, improved in 1873, irrigating 495 acres. All these canals are fed by a large reservoir at Vāghad, 18 miles north of Nāsik town, in which rain-water is stored. The Parsul tank, which commands 5 square miles, irrigated 668 acres in 1903-4. Wells used for irrigation number 21,700, chiefly found in Nāsik, Mālegaon, Sinnar, and Niphād. The depth of water varies from 6 to 32 feet. The water-supply of Peint is deficient.

The forests which formerly covered the Western Ghāts have nearly disappeared, but every effort is being made to prevent further destruction and to afforest some of the hills. The Nāsik forest circle, with a total area of about 1,362[1] square miles, includes three groups—the Girnā, Godāvari, and Peint forests—the lines of hills at Saptashring and Peint being fairly covered with trees. The Reserves are of four chief classes: scrub forest, teak coppice, evergreen forest, and *babūl*. They contain few timber trees of any value. The forest administration is under a divisional Forest officer who has one assistant. The revenue in 1903-4 amounted to nearly Rs. 54,000.

Good building stone is obtainable from the basalt of the trap which occupies the whole of the District. Fine specimens of zeolites occupying cavities in the basalt were disclosed during excavations necessitated by the construction of the railway line.

Trade and communications.

Cotton and silk goods are woven chiefly at Yeola, and thence sent as far as Bombay, Poona, Sātāra, and Sholāpur. The value of the annual exports from Yeola is calculated to amount to 25 lakhs. The silk industry at this place supports 4,000 families. Under the Muhammadans and Marāthās it was a monopoly, which was set aside by a decision of the Bombay High Court in 1864. Since then many outsiders have taken to silk-weaving. Gold and silver thread is also made. Mālegaon contains nearly 3,000 looms; but the product is of inferior quality. Sinnar

[1] This figure exceeds the total given in the table on p. 403 owing to corrections not having been made in the forest registers, and to the non-inclusion in the agricultural returns of 87 square miles of 'protected' forests.

and Vinchūr produce a little cotton cloth of various kinds and colours for local consumption. Copper, brass, and silver vessels are largely manufactured at Nāsik town, and thence sent to Bombay, Poona, and other places. The metal-work of Nāsik, especially in brass, is held to be very superior in make and polish. Besides the railway workshop, there are four ginning factories employing over 750 hands.

The principal articles of export are grain, oilseeds, molasses, cotton cloth and silk goods, *san*-hemp, copper, brass and silver ware. A great quantity of grain, chiefly wheat, is bought up by agents of Bombay firms, at Lāsalgaon, on the railway, 146 miles from Bombay, where there is a permanent market. There is also a considerable export of garden produce, onions, garlic, and betel-leaves. The chief imports are raw silk, cotton thread, copper and brass, sugar, groceries, and salt. Before the introduction of the railway, there was (chiefly along the Bombay and Agra and the Ahmadnagar and Poona roads) a large carrying trade through the District. The Vanjāris or Lamāns, and others in whose hands this traffic rested, have suffered much by the change. Such of them as remain have taken to agriculture. The chief traffic with the interior proceeds through the ancient Thal Pass on its way to Bombay. Weekly markets are held in every town, and in many of the larger villages. Besides these weekly markets, fairs are held each year in connexion with certain temples and religious places, notably Trimbak, which partake very much of the nature of the markets, but are larger and display a greater variety of goods. They usually last for a week or a fortnight, and attract great numbers of people, some from considerable distances. The chief centres of local traffic are Igatpuri, Nāsik, Lāsalgaon, Nāndgaon, Manmād, and Yeola, on or near the railway; Pimpalgaon (Basvant), Chāndor, and Mālegaon, on the Bombay-Agra road; and Sinnar on the Ahmadnagar-Nāsik road.

The communications of the District were improved by the opening of the north-east line of the Great Indian Peninsula Railway in 1861, and by the opening of the Dhond-Manmād State Railway in 1878. The former line enters Nāsik at Igatpuri, and on the 110 miles which pass through the District as far as Naydongri there are sixteen stations. The latter railway forms a chord-line connecting Manmād in Nāsik with Dhond in Poona District on the south-east line of the Great Indian Peninsula Railway. In 1901 the Hyderābād-Godāvari Valley Railway was opened for through traffic from Manmād to Hyderābād. It traverses a few miles of the Chāndor *tāluka* and the north of the Yeola *tāluka*. Besides the railway lines running through the District, there are 570 miles of road, of which 303 are metalled. All are maintained by the Public Works department, except 69 miles of unmetalled road in charge of the local

authorities. The Bombay-Agra trunk road traverses the District; the Nizām's frontier road runs from Satāna through Mālegaon, Manmād, and Yeola to Ahmadnagar; and a third road runs to Poona through Sinnar, Nāsik, Dindori, and Kalvān. Along the 5 miles of road between Nāsik city and Nāsik Road station on the Great Indian Peninsula Railway a small tramway, opened in 1891, carries 150,000 passengers yearly.

Famine.

The great Durgā-devī famine, lasting from 1396 to 1407, is said to have wrought as much devastation in Nāsik as in the Southern Deccan, and the memory of it has never been obliterated. Famines also occurred in 1460, 1520, and 1629, but the severest of which record remains was the famine of 1791–2. Liberal remissions by the Peshwā, the prohibition of grain exportation, and the regulation of prices alleviated the misery. In 1802–4 the ravages of the Pindāris produced such scarcity that a pound of grain is said to have cost 11 annas. The scarcity of 1876–7 caused no little distress. Special measures of relief were taken, and at one period nearly 18,000 persons were employed on works, besides those relieved in villages. The total expenditure on relief during the continuance of the scarcity was about [illegible] lakhs. In 1896–7 the distress was mainly due to high prices of food and did not reach the acute stage. The years 1897 and 1898, though not quite normal, gave the District good *kharīf* and fair *rabi* harvests. But before the District had time to recover from the depletion of stocks and resources occasioned by the strain of the year 1896–7, the people had to face the almost complete failure of the rains of 1899. It is estimated that the total out-turn was only about 19 per cent. of that of an ordinary year. The entire District was thus affected, though not in equal degree. As early as October, 1899, the number on relief reached 1,051. In March, 1900, it rose to 105,664, including 1,247 in receipt of gratuitous relief, and then decreased until February, 1901, when it again rose owing to the unfavourable rains of the previous year. The number gratuitously relieved reached a maximum of 12,207 in September, 1900. The District being on the outskirts of the seriously affected area, the year brought an influx of wanderers from neighbouring States. Between September, 1899, and September, 1900, the number of deaths exceeded the normal by 31,890, and the death-rate per 1,000 exceeded the mean death-rate for the ten previous years by 38. The total cost of relief measures, including remissions of land revenue (11·8 lakhs), amounted to 45 lakhs. Advances to cultivators exceeded 10 lakhs.

Partial inundations frequently occur, and the flood of 1872, when the Godāvari at Nāsik town rose 21 feet above its ordinary level, caused great damage. In 1854 and again in 1904 locusts committed serious ravages.

Administration.

The administration of the District is entrusted to a Collector and three Assistants, of whom two are Covenanted Civilians. The District is divided into the 12 *tālukas* of Nāsik, Sinnar, Igatpuri, Dindori, Niphād, Chāndor, Yeola, Nāndgaon, Mālegaon, Bāglān, Kalvān, and Peint. The Collector is also Political Agent of the Surgāna State.

Until recent years Nāsik was included in the jurisdiction of the Judge of Thāna. It has now a District and Sessions Judge, assisted for civil business by seven Subordinate Judges, including a Joint Subordinate Judge at Nāsik town. There are 35 officers to administer criminal justice in the District. The commonest forms of crime are housebreaking and theft.

The British possessions in Nāsik have, since 1818, been enlarged by the cession of a few villages by Holkar in exchange for others near Indore, and by the lapse of the possessions of the Begam of Peint and of the Rājā Bahādur of Mālegaon. In 1818 the Nāsik territory was placed partly under Khāndesh and partly under Ahmadnagar. The portion allotted to Ahmadnagar was made into a sub-collectorate in 1837; and in 1869 the other portion was added, and the whole was constituted a separate District. At first the old system of management was continued, but the practice of farming the revenue was abolished. Crop rates were changed into acre rates, and for a few years there was considerable prosperity; but with a decline in prices, the poverty of the people became noticeable. Subsequently, between 1840 and 1876, the survey was introduced in the plain country of the Nāsik sub-collectorate, and the revenue was reduced by nearly one-half. In the hilly country to the west the assessment on 'dry-crop' land was fixed at a lump sum, and was made recoverable from each entire village for a period of five years, a plan which proved to be most successful. The portion of the District transferred from Khāndesh was brought under survey in 1868. The effect of the survey in Nāsik was to disclose a great increase in the occupied area; and as in these parts the rates were revised on the expiry of the first guarantee, the revenue increased 53 per cent. above the amount collected in the period before the survey. The revision survey settlement was commenced in 1872. The new survey found an excess in the cultivated area of 4 per cent. in five *tālukas* for which details are available. The average assessment per acre on 'dry' land is 10 annas, on rice land Rs. 2–3, and on garden land Rs. 4–7 for *patsthal* (land watered from a channel), and R. 1 for *motsthal* (land watered from a well).

Collections on account of land revenue and revenue from all sources are shown on the next page, in thousands of rupees.

Outside the limits of the six municipalities of Nāsik, Yeola, Sinnar, Mālegaon, Igatpuri, and Trimbak, the local affairs of the

District are managed by the District board and twelve *tāluka* boards. The total income of the municipalities averages $1\frac{3}{4}$ lakhs. The receipts of the local boards in 1903–4 were Rs. 2,09,000, the principal source of income being the land cess. The expenditure amounted to $1\frac{1}{2}$ lakhs, including Rs. 42,000 spent upon roads and buildings.

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	15,67	17,86	17,79	21,61
Total revenue . .	21,60	24,41	24,44	29,25

The District Superintendent has general control over the police, aided by an Assistant and two inspectors. There are 21 police stations; and the total number of police in 1904 was 796, of whom 14 are chief constables, 171 head constables, and 611 constables. The mounted police number 9, under one *daffadār*. Besides the District jail at Nāsik, there are 14 subsidiary jails in the District, with accommodation for a total of 214 prisoners. The daily average number of prisoners in 1904 was 88, of whom 9 were females.

Compared with other Districts, education is backward in Nāsik, which stood eighteenth among the 24 Districts of the Presidency in 1901 as regards the literacy of its population. The Census returned 4·3 of the population (8·2 males and 0·4 females) as able to read and write. Education, however, has made progress of late years. In 1855–6 there were only 17 schools in the District with 1,268 pupils. In 1881 there were 208 schools and 10,770 pupils. The number of pupils rose to 17,033 in 1891, but fell to 15,378 in 1901. In 1903–4 there were 305 public schools with 14,914 pupils, including 1,841 girls, besides 16 private schools with 283 pupils. Of 305 schools classed as public, one is a high school, 13 middle, and 291 primary. One school is supported by Government, 219 by the local boards, 36 by the municipal boards, 39 are aided and 10 unaided. The total expenditure on education in 1903–4 was about $1\frac{1}{2}$ lakhs, of which Rs. 23,000 were contributed by Local funds and Rs. 18,000 by fees. Of the total, 73 per cent. was devoted to primary schools.

Besides one hospital and 12 dispensaries, there are 4 private medical institutions in the District with accommodation for 128 in-patients. In 1904 the number of patients treated was 135,782, of whom 944 were in-patients, and 2,794 operations were performed. The total expenditure on the hospital and dispensaries was Rs. 23,000, of which Rs. 13,000 was met from Local and municipal funds.

The number successfully vaccinated in 1903–4 was 21,149, representing a proportion of 26 per 1,000 of population, which exceeds the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. xiv (1883).]

Nāsik Tāluka.—*Tāluka* of Nāsik District, Bombay, lying between 19° 48′ and 20° 7′ N. and 73° 25′ and 73° 58′ E., with an area of 470 square miles. It contains 3 towns, NĀSIK (population, 21,490), its head-quarters, being the largest; and 135 villages. The population in 1901 was 96,872, compared with 103,005 in 1891. The density, 206 persons per square mile, is much above the District average. The demand for land revenue in 1903–4 was 1·4 lakhs, and for cesses Rs. 11,000. The west of the *tāluka* is hilly, and there is a small level tract in the east, but the general character of the country is undulating. The soil is generally poor. The water-supply, except near the Western Ghāts, is good. The climate is on the whole healthy.

Nāsik Town.—Head-quarters of Nāsik District, Bombay, situated in 20° N. and 73° 47′ E., 5 miles north-west of Nāsik Road on the north-eastern line of the Great Indian Peninsula Railway, with which it is connected by a light tramway. Distance from Bombay, 107 miles. On account of the great number of pilgrims who visit its shrines, the population of Nāsik varies much at different times of the year. The fixed population would seem to increase but slowly. The return for 1850 gave a total of 21,860. In 1872 the inhabitants numbered 22,436; in 188[illegible]; in 1891, 24,4[illegible] and in 1901, 21,490. Of the total number, 17,944 were Hindus, [illegible] Muhammadans, and 133 Jains.

Among Hindus Nāsik is considered a spot of special interest and holiness. This is due to the sanctity of the river Godāvari, and to the belief that Rāma, hero of the Rāmāyana, lived here for some time with his wife Sītā and his brother Lakshman. About 30 miles from its source, the Godāvari, flowing eastwards through a group of small hills, turns sharply to the south, and, after passing in that direction for about a mile, again swerves suddenly towards the east. Here, on both sides of the river, but chiefly on its right or south-eastern bank, lies the town of Nāsik. Along the right bank the town stretches for about a mile, spreading over three small hills that rise abruptly from the river-side. The buildings, covering an area of about 2 square miles, are divided into two main parts—the new town to the north and the old town to the south. Though, according to tradition, a place of extreme antiquity, the old town of Nāsik is without ruins or buildings of any age, except the mosque standing on the site of the old fort. In style and appearance the houses do not differ from the new quarter, little of which is more than a hundred years old.

Pānchvati, the portion of the town on the left bank of the river, in extent about one-seventh part of the whole, is connected with the main town by the Victoria Bridge, built in 1897 at a cost of $2\frac{1}{2}$ lakhs. It has several large temples and substantial dwellings, owned and inhabited chiefly by Brāhmans. Between Pānchvati and the old town

the river banks are, for about 400 yards, lined with masonry walls and flights of stone steps or *ghāts*. On both sides places of worship fringe the banks, and even the bed of the stream is thickly dotted with temples and shrines. The river is split up into a series of pools or tanks (*kunds*) bearing the names of Hindu deities, of which the Rāmkund is reputed to be the holiest. Though the town is not walled, the streets opening on the river and leading to the southern and western suburbs are ornamented with gateways. The streets are for the most part narrow and crooked; and the houses, built on plinths 2 or 3 feet high, have almost all an upper floor, and most of them more than one storey. The fronts of many are rich in well-carved woodwork, and the whole place has an air of wealth and comfort not to be seen in most Deccan towns.

Though, since the misfortunes of Rāma and Sītā, Nāsik has ranked among the most sacred places of Hindu pilgrimage, its early Hindu rulers do not seem to have raised it to any position of wealth or importance. The Musalmāns made it the head-quarters of a division, and are said to have protected the town by building a fort, and to have fostered its trade, introducing the manufacture of paper and other industries. On the rise of the Marāthā power, Nāsik, chosen by the Peshwās as one of their capitals, increased in size and wealth. At first, under British government, it passed through a time of depression; but of late years the opening of railway communication and the establishment here of the head-quarters of the District have added much to its wealth and prosperity.

Among the objects of interest in the neighbourhood of Nāsik are the Dasara *maidān*, about half a mile to the south-east of the city; Tapovan with some caves and a famous shrine of Rāma about a mile east of Pānchvati; the old settlement of Govardhan or Gangāpur, with a picturesque waterfall, 6 miles to the west; the Christian village of Shāranpur about a mile to the north-west; the Jain Chāmbhār caves and the Pāndu Lena or Buddhist caves. These last are situated in one of three isolated hills, close to the Bombay road, which are called in the inscriptions Trirashmi. They are a group of old Buddhist caves (250 B.C. to A.D. 600), with many inscriptions of kings of the Andhra, Kshatrapa, and other dynasties. The caves are 17 in number and are of three kinds: *chaitya* or chapel caves, *layanas* or dwelling caves, and *sattras* or dining caves. Almost every cave has a cistern or two with a water-supply. The caves when first finished do not seem to have contained images. Later image worshippers appear to have transformed them to suit the new creed. The images are chiefly of Gautama Buddha; the Bodhi-sattwas, Vajrapāni and Padmapāni; and the Buddhist goddess Tārā. The inscriptions hold the first place in Western India on account of their length, preservation, and the value

of the information they supply. Their contents throw light on the history of Western India between 100 B.C. and A.D. 100, giving many names of countries, mountains, rivers, cities, towns, and villages. Chāmbhār Lena, or the Chāmbhār caves, are cut in a hill 600 feet above the plain, about 5 miles north of Nāsik. They are Jain caves of no great age or merit. In 1870 the Jain community of Nāsik, comprising some wealthy Mārwāri and Gujarāti bankers and cloth-dealers, built a wall near the caves, a flight of steps, a cistern at the foot of the hill, and a large resthouse in Mhasrul village which lies close by. The caves are about 450 feet from the base of the hill and face southwest. The upper part of the ascent is by a stair of roughly dressed stone, containing 173 steps of varying heights and with side parapets. [For a description of these caves see *Bombay Gazetteer*, vol. xvi, pp. 541–639 and 426–8.]

The municipality was established in 1864 and raised to the position of a city municipality in 1874. The receipts during the decade ending 1901 averaged Rs. 85,000. In 1903–4 the income was Rs. 73,000, chiefly drawn from octroi, a house-tax, a sanitary cess, and tolls, together with a tax on pilgrims. The climate is healthy and pleasant. The Government high school has 220 pupils, and there is a good public library. Besides the chief revenue and judicial offices, the town contains two Subordinate Judges' courts, two hospitals (including the Bai Dhankor [illegible] for females), and a dispensary in Pānchvati.

The industries of Nāsik maintain something of their former importance, although, owing to the competition of machinery, the manufacture of paper has greatly declined. Neither wool nor silk is woven here; but cotton hand-loom weaving is still carried on with success, and in brass- and copper-work Nāsik ranks first among the towns of the Bombay Presidency. The cotton-weavers earn about 4 to 5 annas a day for twenty days in the month; women assist and earn 1 to 2 annas a day. The old and new palaces of the Peshwā accommodate the Collector's Court and the municipal and other public offices.

Nasīrābād Subdivision.—Subdivision and *tahsīl* of the Sibi District, Baluchistān, lying between 27° 55′ and 28° 40′ N. and 67° 40′ and 69° 20′ E., on the border of the Upper Sind Frontier District of Sind. It has an area of 852 square miles and a population (1901) of 35,713, and, for administrative purposes, includes the railway line from the neighbourhood of Jhatpat to Mithri. The head-quarters of the *tahsīl* are at present at Nasīrābād, about 8 miles from Jacobābād. It contains 170 villages. It depends for cultivation on the Begāri and Desert Canals of the Sind system, and is the only *tahsīl* in Administered territory in which indigo and gram are produced. In 1904–5, the first complete year of administration, the land revenue, excluding water rate, amounted to 1·2 lakhs. Water rate is levied at

R. 1 per irrigated acre on the Begāri Canal, and at Rs. 1-8 on the Desert Canal. The incidence of land revenue is R. 1 per acre, and a special cess of 6 pies is also collected. A revision of the rates is contemplated, beginning from 1905.

Nasīrābād Tāluka.—*Tāluka* in Lārkāna District, Sind, Bombay, lying between 27° 13′ and 27° 33′ N. and 67° 33′ and 68° 6′ E., with an area of 417 square miles. The population in 1901 was 56,544, compared with 44,644 in 1891. The *tāluka* contains 65 villages, of which Wārah is the head-quarters. The density, 135 persons per square mile, slightly exceeds the District average. The land revenue and cesses in 1903-4 amounted to 2·8 lakhs. Nasīrābād is a rice-producing *tāluka* and depends for its irrigation upon the Chilo Wah and Nasīr Wah, both subsidiaries of the Ghar Canal. On the south the soil contains much salt and is unfit for cultivation.

Nasīrābād Town (1).—Town in the Jalgaon *tāluka* of East Khāndesh District, Bombay, situated in 21° N. and 75° 40′ E., 2 miles south of Bhādli on the north-eastern line of the Great Indian Peninsula Railway. Population (1901), 12,176. The town is noted for the manufacture of glass bangles by Musalmāns. There are several old mosques in the neighbourhood. Jalgaon, the head-quarters of the *tāluka*, lies about 6 miles to the west. Nasīrābād was several times harried by the Bhīls of the Sātmāla range before the occupation of tho country by the British. In 1801 it was plundered by a freebooter named Juba, and again, just before the great famine of 1803, by one of the Peshwā's deputies. After this the village wall was built by one of the Purandhare family, to whom the town was given in grant. The town contains a cotton-ginning and pressing factory, and six schools, with 773 pupils, of which two, with 92 pupils, are for girls.

Nasīrābād Town (2).—Head-quarters of Mymensingh District, Eastern Bengal and Assam, situated in 24° 46′ N. and 90° 24′ E., on the west bank of the old Brahmaputra. Population (1901), 14,668. The Dacca section of the Eastern Bengal State Railway passes through the town. Nasīrābād was constituted a municipality in 1869, and has hitherto been known by that name; but recently it was decided to change its designation to that of the Mymensingh municipality. The income during the decade ending 1901-2 averaged Rs. 50,000, and the expenditure Rs. 49,000. In 1903-4 the income was Rs. 77,000, including Rs. 9,000 derived from a property tax, Rs. 10,000 from a conservancy rate, Rs. 3,000 from a tax on houses and lands, and Rs. 11,000 from a water rate. The incidence of taxation was Rs. 2-7-8 per head of the population. In the same year the expenditure was Rs. 81,000, the chief items being Rs. 2,000 spent on lighting, Rs. 3,000 on drainage, Rs. 12,000 on conservancy, Rs. 14,000 on medical relief, Rs. 3,000 on roads, Rs. 13,000 on buildings, and Rs. 28,000 on water-

supply. The system of water-supply, constructed in 1893 at a cost of 1·42 lakhs, was presented to the town by Mahārājā Sūrjya Kānta Achārjya.

The town possesses the usual public buildings. In the District jail, which has accommodation for 550 prisoners, the chief industries carried on are oil-pressing, carpet- and cloth-weaving, mat and cane chair-making, brick-making, and brick-pounding. The products are disposed of locally. The chief educational institutions are the Mymensingh Government school, established in 1853, with 301 pupils on the rolls at the end of 1904; and the City College of Mymensingh, established in 1901, with 120 scholars, which is affiliated to the Calcutta University and teaches up to the First Arts standard. The Nasīrābād charitable dispensary, with 24 beds, an eye infirmary, and a female ward, was maintained in 1903 at a cost of Rs. 11,000; at this institution 836 in-patients and 21,000 out-patients were treated during the year.

Nasīrābād Town (3).—Town and cantonment in Ajmer-Merwāra, Rājputāna, situated in 26° 18′ N. and 74° 43′ E., on a bleak, open plain, sloping eastward from the Aravalli Hills. Population (1901) of cantonment, 2,454; of town, [illegible]; total, 22,4[illegible]. Hindus number 14,283, Musalmāns 7,05[illegible], Christians [illegible], and Jains 354. The area of the [illegible] ment is 8[illegible] square [illegible]. The military station, [illegible] 1818 by Sir David Ochterlony, [illegible] a mile [illegible] its outskirts the native town. Lines exist for a battery of field artillery, a regiment of British infantry, a regiment of Native infantry, and a squadron of Native cavalry. Nasīrābād is in the Mhow division of the Western Command. The drainage is good, but the water is brackish and insufficient in quantity. The two Bengal Infantry regiments and a [illegible] battery at Nasīrābād mutinied on May 28, 1857, and marched away to Delhi without attempting to attack Ajmer. The Bombay cavalry regiment protected the British residents and remained loyal throughout. Nasīrābād is a station on the Mālwā line of the Rājputāna-Mālwā State Railway. The United Free Church of Scotland has a mission establishment here, and maintains a hospital. Local affairs are managed by a cantonment committee. The town possesses a hydraulic press.

Nasrat.—*Tāluka* in Hyderābād District, Sind, Bombay, recently (1903) formed from the Moro, Sakrand, and Shāhdādpur *tālukas*, and lying between 26° 4′ and 26° 37′ N. and 68° 23′ and 68° 56′ E., with an area of 930 square miles. The population (1901) is 5,074, living in 74 villages, of which Nawābdiah is the head-quarters. The land revenue and cesses in 1903–4 amounted to about Rs. 86,000. The prevailing feature of the *tāluka* is its sandhills; and prior to 1903 it consisted of a stretch of desert dependent on the rainfall. It is now irrigated by the Nasrat Canal, and produces *bājra*, sesamum, and cotton.

Naswādi.—Petty State in Rewā Kāntha, Bombay.

Nāthdwāra ('the portal of the god').—Walled town in the State of Udaipur, Rājputāna, situated in 24° 56′ N. and 73° 49′ E., on the right bank of the Banās river, about 30 miles north-by-north-east of Udaipur city, and 14 miles north-west of Maolī station on the Udaipur-Chitor Railway. In 1901 the town contained 8,591 inhabitants, more than 83 per cent. being Hindus; but, in a place of pilgrimage like this, the population varies almost weekly. There is a combined post and telegraph office, and the Mahārāj Gosain of Nāthdwāra maintains a dispensary. The town possesses one of the most famous Vaishnavite shrines in India, in which is an image of Krishna, popularly said to date from the twelfth century B.C. This image was placed by Vallabhāchārya in a small temple at Muttra in 1495 and was moved to Gobardhan in 1519. About 150 years later, when Aurangzeb endeavoured to root out the worship of Krishna, the descendants of Vallabhāchārya left Muttra District with their images and wandered about Rājputāna till 1671, when Rānā Rāj Singh invited three of them to Mewār. To Dwārka Nāth he assigned the village of Asotiya near Kānkroli, while for Srī Nāthjī's worship he set apart the village of Siār, to the south of which the town of Nāthdwāra was subsequently built. The guardian of the temple is termed Mahārāj Gosain, and is the head of the Vallabhāchārya sect of Brāhmans; besides this town, he holds thirty villages in different parts of Mewār, and land in Baroda, Bharatpur, Bīkaner, Karauli, Kotah, Partābgarh, and other States, and a village in Ajmer District granted by Daulat Rao Sindhia. The annual income of his estates is about two lakhs, and the offerings received at the shrine are estimated at between four and five lakhs yearly. Small jewels of gold or silver, very artistically decorated with coloured enamel, are made at Nāthdwāra, and sold to pilgrims.

[A. Cunningham, *Archaeological Survey of Northern India*, vol. xxiii, pp. 99–101.]

Nathia Gali.—Hill station in the Abbottābād *tahsīl* of Hazāra District, North-West Frontier Province, and summer head-quarters of the Chief Commissioner, situated in 34° 5′ N. and 73° 58′ E., on the road from Murree to Abbottābād, about half-way between each place. Together with Dungā Gali, it constitutes a 'notified area' under the Punjab Municipalities Act, 1891, of which the income in 1903–4 was Rs. 3,000, chiefly derived from a house tax. The expenditure was Rs. 1,900.

Natmauk.—North-eastern township of Magwe District, Upper Burma, lying between 20° 15′ and 20° 46′ N. and 95° 2′ and 95° 49′ E., with an area of 887 square miles. The greater part of the area is dry and poorly watered. Rice is raised in the neighbourhood of the Yin

river, while over the rest of the township the chief crops are millet and sesamum. The population was 42,611 in 1891, and 53,262 in 1901, distributed in 181 villages. The head-quarters are at Natmauk (population, 530), on the Yin river, 36 miles north-east of Magwe, with which it is connected by a good road. In 1903-4 the area cultivated was 167 square miles, and the land revenue and *thathameda* amounted to Rs. 82,000.

Natogyi.—North-eastern township of Myingyan District, Upper Burma, lying between 21° 18′ and 21° 40′ N. and 95° 31′ and 96° 1′ E., with an area of 395 square miles. Its surface is undulating, rising towards the north and north-west. *Mogaung* rice is grown near the borders of Kyaukse District; the staple crop, however, is cotton. Irrigation renders this the richest township in the District. The population was 52,956 in 1891, and 57,338 in 1901, distributed in 160 villages, Natogyi (population, 3,146), a prosperous cotton market in the centre of the township, being the head-quarters. In 1903-4 the area cultivated was 161 square miles, and the land revenue and *thathameda* amounted to Rs. 1,17,000.

Nator Subdivision.—[illegible] subdivision of Rājshāhi District, Eastern Bengal and Assam, lying between [illegible] 7′ and 24° 48′ N. and 88° [illegible] E., with an area of 8[illegible] square [illegible] The population [illegible] compared with 443,5[illegible] [illegible] density [illegible] persons per square mile. [illegible] 8,654) [illegible] subdivision [illegible] [illegible]

Nator Town.—Head-quarters [illegible] in Rājshāhi District, Eastern Bengal and Assam, situated in 24° 26′ N. and 89° 1′ E., on the north bank of the Nārad river, on the northern section of the Eastern Bengal State Railway, and on the main road from Rāmpur Boāliā to Bogra. Population (1901), 8,654. It was formerly the capital of the District; but owing to its unhealthiness (the town being built on low marsh-land reclaimed from the river), the head-quarters were transferred to Rāmpur Boāliā. Nator is a compact town, clinging close round the palace of the Nator Rājās. This family rose into power in the early part of the eighteenth century, and gradually obtained possession of most of the District; but it has since greatly declined. Nator was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 14,200, and the expenditure Rs. 13,500. In 1903-4 the income was Rs. 15,600, including Rs. 5,700 derived from a tax on persons (or property tax), Rs. 3,300 from a conservancy rate, and Rs. 3,000 from a tax on animals and vehicles; and the expenditure was Rs. 13,400. Nator contains

the usual subdivisional offices; the sub-jail has accommodation for 12 prisoners.

Naugaon.—*Thakurāt* in the MĀLWĀ AGENCY, Central India.

Naugaon.—British cantonment in Central India. *See* NOWGONG.

Naungpale.—One of the KARENNI States, Burma.

Naushahra Tahsīl (1).—*Tahsīl* of Peshāwar District, North-West Frontier Province, lying between 33° 47′ and 34° 9′ N. and 71° 40′ and 72° 15′ E., with an area of 703 square miles. It consists of a small tract of low-lying riverain land on both sides of the Kābul river, known as the Khālsa *tappa*, and of the Khattak *pargana* which includes the Khwarra-Nīlāb valley and is separated from it by the Khattak range. This range culminates in the Ghaibāna Sir (5,136 feet in height) on the western boundary of the *tahsīl*, and the sanitarium of Cherāt (4,542 feet), whence the range trends to the eastward, gradually sinking to 2,380 feet at Hodi Sir above the Indus. Half the *tahsīl* is hilly and very broken country, the main part of its area consisting of the arid and barren slopes on the north of the Khattak hills towards Kābul. The north-west corner is irrigated by the KĀBUL RIVER CANAL. The population in 1901 was 116,16[illegible] compared with 180,201 in 1891. It contains the town of NAUSHAHRA (population, 9,518), the head-quarters, the hill station of CHERĀT, and 142 villages. The land revenue and cesses in 1903-4 amounted to Rs. 1,21,000.

Naushahra Town (1).—Town and cantonment in Peshāwar District, North-West Frontier Province, and head-quarters of the subdivision and *tahsīl* of the same name, situated in 34° N. and 72° E., on the North-Western Railway and the grand trunk road, 27 miles due east of Peshāwar. Population (1901), 9,518. The cantonment stretches along the right bank of the Kābul river on a sandy plain, 3 miles in diameter, and is surrounded by low hills on all sides except the north, which is open towards the river. The garrison now consists of one British infantry regiment, two Native cavalry and four infantry regiments, a mountain battery, and a bearer corps, belonging to the Peshāwar division of the Northern Command. The Kābul river is crossed by a permanent bridge of boats, whence roads lead to Mardān and Chārsadda. The iron road and railway bridge across the river was opened on December 1, 1903. The village of Naushahra Khurd, west of the cantonment, and the large village of Naushahra Kalān, on the north bank of the Kābul, are both outside cantonment limits. The head-quarters of the Naushahra *tahsīl*, with the police station, are in the former, 3 miles from the cantonment. The town contains a Government dispensary and a vernacular middle school, maintained by the District board.

Naushahra Tahsīl (or Sādikābād) (2).—*Tahsīl* in the Khānpur *nizāmat*, Bahāwalpur State, Punjab, lying between 27° 56′ and 28°

54′ N. and 70° 7′ and 70° 36′ E., with an area of 1,690 square miles. The population in 1901 was 80,735, compared with 66,584 in 1891. It contains the town of NAUSHAHRA (population, 4,475), the head-quarters; and 71 villages. The Hakra, which traverses the southern part of the *tahsīl*, separates the central tract from the desert. Along the Indus lie fertile lowlands. The land revenue and ce[illegible]s in 1905–6 amounted to 2 lakhs.

Naushahra Town (2).—Head-quarters of the *tahsīl* of the same name in Bahāwalpur State, Punjab, situated in 28° 25′ N. and 70° 19′ E., 109 miles south-west of Bahāwalpur town. Population (1901), 4,475. The town contains a rice-husking mill, started in 1901, and a dispensary. The municipality had an income in 1903–4 of Rs. 3,700, chiefly from octroi.

Naushahro.—Subdivision of Hyderābād District, Sind, Bombay, composed of the SAKRAND, MORO, NAUSHAHRO FIROZ, KANDIARO, and NASRAT *tālukas*.

Naushahro Abro.—*Tāluka* of Sukkur District, Sind, Bombay, lying between 27° [illegible] 28° 2′ N. and 68° 15′ and 68° 48′ E., wi[illegible] an area of 408 s[illegible] The [illegible] from 66,227 in 18[illegible] to 71,036 [illegible] (popula[illegible] 147 [illegible] land reve[illegible] and cesses in 190[illegible] amounted to [illegible] lakhs. The *tāluka* is fertile [illegible] together with th[illegible] *tāluka*, is the most prosperous [illegible] wh[illegible]

[illegible]

with an area of 539 square miles. The population in 1901 was 97,506, compared with 90,976 in 1891. The density, 181 persons per square mile, greatly exceeds the District average. The number of villages is 105, of which Naushahro Fīroz is the head-quarters. The land revenue and cesses in 1903–4 amounted to about 2·3 lakhs. The western portion of the *tāluka* is covered with forests, which have suffered of late years from the encroachments of the river. About two-thirds is irrigated by canals, aided by wells. The chief crops are wheat, gram, *jowār*, and indigo.

Navalgund Tāluka.—North-western *tāluka* of Dhārwār District, Bombay, lying between 15° 21′ and 15° 53′ N. and 75° 5′ and 75° 33′ E., with an area of 565 square miles. It includes the petty subdivision (*petha*) of Nargund. There are three towns, ANNIGERI (population, 7,172), NARGUND (10,416), and NAVALGUND (7,862), the head-quarters; and 83 villages. The population in 1901 was 94,709, compared with 105,876 in 1891. Navalgund is the most thinly populated

tāluka in the District, with a density of 168 persons per square mile. The demand for land revenue in 1903–4 was 3·9 lakhs, and for cesses Rs. 28,000. The *tāluka* forms an expanse of black soil, with three hills, namely, Great Nargund, Chik or Little Nargund, and Navalgund, running from north-west to south-east. The supply of drinking-water is chiefly from rivers. The rainfall, which averages 24 inches in the year, is uncertain.

Navalgund Town.—Head-quarters of the *tāluka* of the same name in Dhārwār District, Bombay, situated in 15° 33′ N. and 75° 21′ E., 24 miles north-east of Dhārwār town. Population (1901), 7,862. The town is celebrated for the excellence of its cotton carpets, and for its superior breed of cattle, which are chiefly sold at the weekly market on Tuesdays. In 1454 it appears as the head-quarters of a *sarkār* under the Bahmani Sultān Alā-ud-dīn. In 1690, under Aurangzeb's governor of Savanūr, it was the head-quarters of a revenue division, managed by an hereditary Lingāyat officer styled the Desai of Navalgund. In 1747 it was ceded to the Peshwā. It was conquered by Tipū Sultān, and taken from him by the Marāthās, who gave the Desai's family a maintenance in land yielding [illegible] per annum. Between 1795 and [illegible] the [illegible] which [illegible] the Marāthā State, Dhundu [illegible] Navalgund and Gadag from the hereditary Desai. [illegible] appointed one Rām Rao as the [illegible] officer of Navalgund, who seized possession of more than half the district, and defeated the son of [illegible] of this [illegible], Gokhale [illegible] defeated by [illegible] Munro, [illegible] enjoys some *inām* lands [illegible] 1858 [illegible] on condition [illegible] Desai abolished all duties on [illegible]. A municipality was constituted in 1870, of which the receipts during the decade ending 1901 averaged Rs. 7,200. In 1903–4 the income was Rs. 6,700. The town contains a dispensary, and three schools, including one for girls.

Navānagar State.—Native State in the Kāthiāwār Political Agency, Bombay, lying between 21° 44′ and 22° 58′ N. and 69° 20′ and 70° 33′ E., on the southern shore of the Gulf of Cutch, with an area of 3,791 square miles. It is bounded on the north by the Gulf and the Rann of Cutch; on the east by the Native States of Morvi, Rājkot, Dhrol, and Gondal; on the south by the Sorath division of Kāthiāwār; and on the west by the Okha Rann and the Arabian Sea. It is generally flat, but about two-thirds of the Bardā hills are contained within its limits. Mount Venu, the highest point of the Bardā hills, is 2,057 feet above sea-level. The principal rivers are the Bhādar, the Vartu, the Aji, and the Und. The harbours of Jodiya Salāya and Navānagar or Bedi are situated within the State. Mangrove swamps line the shores of the Gulf, affording large supplies of firewood and

pasture. The *Aloe littorale* grows wild; its stalks when cooked are supposed to taste like asparagus. Formerly the Navānagar State was infested by lions, which were especially numerous in the Bardā and Alech hills. In 1860, however, when cannon were frequently fired in pursuit of the rebel Vāghers, the lions fled from the hills, and are now only found in the Gir forest, and (rarely) in the Girnār mountain near Junāgarh. Leopards, the hunting cheetah, and *nīlgai* are common. The climate, especially on the Gulf of Cutch, along which the territory extends, is good. The annual rainfall averages between 20 and 30 inches.

The Jām of Navānagar is a Jādeja Rājput by caste, and belongs to the same family as the Rao of Cutch. The Jādejas entered Kāthiāwār from Cutch, and dispossessed the ancient family of Jethwas (probably a branch of Jāts) then established at Ghumli. Subsequently, about 1535–7, Jām Rāwal invaded Sorath and conquered the Jodiya, Amran, and Khambhāliya *parganas*, and in 1540 founded the town of Navānagar. He prosecuted his success with the assistance of his brothers Hardoljī, Rāvojī, and Modjī. Hardoljī, the founder of the house of Dhr[illegible], conquered that *pargana* from Dam[illegible]nāvada [illegible]d retained it. Rājkot is also an offshoot of this State. The Jām [illegible]1807 [illegible]xecuted the usual engagements to pay tribute, to keep ord[illegible] his [illegible]ritory, and not to encroach on his neighbours. The Jādeja tribe [illegible]s, at the beginning of the last century, notorious for the systematic murder of female children, to avoid the difficulty and expense of providing them with husbands. Engagements were entered into by the Jādeja chiefs in 1812 to abandon this custom; and, under the constant watchfulness of the British officers, it is believed to be now extinct. The Jām of Navānagar is entitled to a salute of 11 guns. He holds a *sanad* authorizing adoption, and succession follows the rule of primogeniture. The present Jām is the well-known cricketer, Ranjītsingkjī.

The population at the last four enumerations was: (1872) 290,847, (1881) 316,147, (1891) 379,611, and (1901) 336,779. The decrease in the last decade (11 per cent.) was due to the famine of 1899–1900. Hindus number 262,880; Muhammadans, 52,684; and Jains, 21,006. There are 3 towns and 666 villages, the capital of the State being NAVĀNAGAR TOWN.

The land produces both garden and 'dry crops.' Irrigation is provided by draw-wells, by artificial tanks, and by aqueducts from rivers. The total cultivable area is 1,960 square miles, 1,717 square miles being under crops in 1903–4, of which 117 square miles were irrigated. Survey operations are in progress in the State. The principal products are grain and cotton. *Jowār*, *bājra*, wheat, and gram are the staple food-crops. Wheat is produced without irrigation. At Rāwal about 3,000 acres are irrigated for rice. Cotton, sugar-cane, and tobacco are

raised in small quantities. A reservoir for the drinking supply of the capital and for purposes of irrigation has been built 8 miles south of Navānagar town. The only forests of any importance are those in the northern portion of the Barda hills.

Marble of different qualities is found in the Kandorna and Bhanwār *tālukas*. Copper occurs in the Khambhāliya *pargana*, but does not pay working expenses. A small pearl fishery lies off the coast on the southern shore of the Gulf. Cloth and silk are the chief manufactures. A considerable number of people are employed as dyers. The dyes applied to the local fabrics are much admired, and their excellence is traditionally attributed to the quality of the water of the Rangmati river, which flows by Navānagar town. The railway has had no perceptible effect on the trade of Navānagar ports, from which the grain and cotton grown in the State are still shipped. A trade in isinglass and shagreen is growing up, and the fisheries supply sole, pomphlet, and whitebait. The State owns 299 vessels, and the coast is provided with 4 lighthouses. The total value of imports by sea in 1903–4 was [illegible] lakhs, and of exports 15 lakhs. There is [illegible] communication by carts, pack-bullocks, horses, and [illegible] connected with Rajkot by [illegible] gauge rail[illegible] d by the State [illegible]

[illegible] of British [illegible] permission [illegible] is [illegible] lakhs). Tribute of [illegible] the [illegible] dues are levied.

The State has one municipality, with an income (1903–4) of Rs. 33,000. It maintains a squadron of Imperial Service Lancers, numbering 145, and a subordinate force of 211 men, of whom 26 are mounted. The police force numbers 876, and there are 8 jails and 4 lock-ups with a daily average in 1903–4 of 208 prisoners. The State contained in the same year 122 schools with 11,771 pupils, and 22 medical institutions, including 2 veterinary dispensaries treating 1,400 animals. In the medical institutions 85,000 patients were treated in 1903–4; and the number of persons vaccinated in the same year was 9,600.

Navānagar Town (or Jāmnagar).—Capital of the State of the same name in Kāthiāwār, Bombay, situated in 22° 26′ N. and 70° 16′ E., 310 miles north-west of Bombay, and 5 miles east of the port of Bedi. Population (1901), 53,844, of whom Hindus numbered 32,005, Musalmāns 17,027, and Jains 4,621. The town was founded by Jām Rāwal in 1540. It is almost entirely built of stone and is surrounded by a fort erected in 1788. Navānagar is a flourishing place, nearly

4 miles in circuit, with a large trade. In the sea, north of the town, are some beds of pearl oysters; but the pearls are of inferior quality and the fishery appears to be mismanaged. The out-turn realizes about Rs. 4,000 annually. The town is also known for silken and gold embroidery, for incense and perfumed oils, and for the *kanku* or red powder which is used to make the sectarian mark on the forehead of Hindus. The value of imports at Bedi in 1903–4 was 17·2 lakhs, and of the exports 5·3 lakhs. The dyeing is famous, and the water of the Rangmati river is supposed to be especially favourable to this industry. The climate is pleasant, and the palaces of Kotha, Lakhota, &c., are very picturesque. Large quantities of plantains are grown in the Navānagar gardens. Near by is the tomb of Jasa Lādhak. The town possesses a clock-tower and a vegetable market.

Navarangapur.—*Zamīndāri tahsīl* of Vizagapatam District, Madras. *See* NOWRANGAPUR.

Navsāri Prānt.—A *prānt* or district of the Baroda State. It is the most southerly of the four *prānts* into which the Gaikwār's territory is divided, and is much intermingled with the British District of Surat. It is bounded on the north by Broach and the Rewā Kāntha Agency; on the south by Surat District, Bānsda, and the Dāngs; on the east by Khāndesh; and on the west by Surat and the Arabian Sea. Its area is 1,952 square miles, and it is traversed by the Kim, Tāpti, Mindhola, Pūrna, and Ambikā rivers. Two natural divisions may be mentioned: the *rāni* or forest *tālukas*, and the *rāsti* or peaceful and populous *tālukas*. The climate of the former is at all times malarious, though least so in the hot season, and the water is full of organic matter; but the *rāsti mahāls* are considered to be healthy. The *rāni tālukas* lie in the east, and contain ranges of hills varying from 400 to 2,000 feet above sea-level, while the peak of Sālher rises to 5,263 feet. Hot springs are found at Unhai in the Vyāra *tāluka*.

The land is largely under cultivation, especially on the lower ground. Where the general surface is fairly raised above the level of streams, there is a good deal of grass and a fair quantity of *Cassia auriculata*. The hedges round fields include various species of *Capparideae*, such as *Maesua*, *Cadaba*, and *Capparis*, with several *Euphorbiaceae*, such as *Euphorbia antiquorum* and *Jatropha Curcas*, and species of *Zizyphus* and *Grewia*; *Streblus asper* is also frequent. The climbers in these hedges include *Leguminosae* like *Canavalia*, *Asclepiadaceae* like *Deamia*, and various *Convolvulaceae*. Weeds in waste ground include *Argemone mexicana*, *Tridax procumbens*, *Achyranthes aspera*, *Calotropis gigantea*, and *Tephrosia purpurea*; field-weeds include such species as *Biophytum sensitivum*, *Blumea eriantha*, *Launaea nudicaulis*, *Stemodia viscosa*, *Panicum prostratum*, and *Dinebra arabica*. In the neighbourhood of dwellings are many planted sub-spontaneous species, such as

mango, tamarind, banyan, *pīpal* and other species of *Ficus*, *Anona squamosa*, and *Artocarpus integrifolia*.

The population was estimated in 1872 at 241,255. At later enumerations it was: (1881) 287,549, (1891) 319,443, and (1901) 300,441. In the last year Hindus numbered 126,624; Animists, 138,034; Musalmāns, [illegible]451; and Pārsīs, 7,589. The *prānt* is divided into eight *tālukas* or *mahāls*, and two *pethas* or sub-*mahāls*, statistics regarding which in 1901 are shown below:—

Tāluka.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Navsāri	125	1	60	59,875	479	+ 11·9	11,476
Gandevi	46	2	28	30,920	672	− 5·8	3,905
Mahuva	143	...	69	33,720	236	− 5·0	1,646
Vyāra	360	1	153	44,237	123	− 17·0	1,518
Songarh	344	1	152	28,217	82	− 4·9	642
Vājpur	460	...	91	6,218	14	− 26·8	175
Velāchha	140	...	[illegible]	[illegible]	[illegible]	− 11·1	1,172
Vā[illegible]al	78	[illegible]	[illegible]	[illegible]	162	[illegible]	98
P[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	266	[illegible]	[illegible]1
[illegible]ilna	[illegible]	[illegible]	[illegible]	[illegible]	278	+ [illegible]	[illegible]1
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	154	+ [illegible]	[illegible]64

The number of towns is [illegible] the former being [illegible] V[illegible] GANDEVI, [illegible], and SONGARH. About 75 per cent. of the population [illegible] Gujarāti, and 21 per cent. [illegible] Bhīl dialects. The chief aboriginal tribes are the [illegible] ([illegible]), D[illegible] ([illegible],000), Chodhrās (23,000), Bhīls (16,000), and Dhodias (1,000).

The soils are classified as light sandy loam or *gorāt*, and black soil, with an intermediate class known as *besār*. *Gorāt* produces all kinds of 'dry crops,' and when watered and manured is valuable. Rice and cotton are the chief products in the black soil. The principal crops grown are *jowār*, rice, wheat, *bājra*, *kodra*, *nāgli*, *bāvto*, *tuver*, *vāl*, peas, gram, *mag*, *math*, *udid*, *diveli*, *tal*, cotton, hemp, tobacco, sugar-cane, plantain, *bhoising*, &c. The most valuable stock are the large powerful cattle known as *hedia*.

This *prānt* is noted for its forests, the area of the Reserves being 547 square miles. These are now under a system of strict conservancy and yield a considerable income. The principal timber trees are teak, *shīsham* (*Dalbergia Sissoo*), *khair* (*Acacia Catechu*), *bia* (*Pterocarpus Marsupium*), *haladvan* (*Adina cordifolia*), *temru* (*Diospyros melanoxylon*), and *sadad* (*Terminalia tomentosa*).

The chief industry is the weaving of cotton cloth. Embroidery to

a small extent, the manufacture of gold ornaments, a little rough iron-work, brass- and copper-work, wood- and ivory-carving are also carried on. But though arts and manufactures are scanty, trade and commerce flourish fairly well. The agricultural and forest wealth is great; and there is a considerable export of toddy, plantains, sugar-cane, rice, *jowār*, molasses, sugar, teak, *sad*', and other produce. The import trade too is good, the chief articles being European piece-goods, stationery, iron-ware, glass-ware, umbrellas, and brass and copper vessels. Trade is carried on partly by sea from Bilimora and Navsāri, but chiefly by railway. In this latter respect the *prānt* is well served, for the Bombay, Baroda, and Central India Railway runs from north to south, and the Tāpti Valley Railway crosses it from east to west. Roads lead from Sayan to Kāthor, Bilimora to Gandevi, Kosamba to Velāchha, Maroli to Navsāri, and Vyāra to the Unhai hot springs.

The land revenue increased from 19·5 lakhs in 1881 to 21·4 lakhs in 1891, but fell to 19·3 lakhs in 1901. In 1904–5 the demand was 16·4 lakhs, of which 15·7 lakhs was collected. Most of the *prānt* was settled between 1896 and 1903, and the assessment of portions is now being revised. In a few vill[illegible] the Songarh *tāluka* land was formerly assessed on the numb[illegible] ploug[illegible]ed [illegible] cultivation, but this method has been replaced by the or[illegible]ry sy[illegible]m. The average assessment in different *tālukas* varies from Rs. [illegible]4 to Rs. 3–2 per *bīgha* ($\frac{4}{7}$ acre) for 'dry' land, and from Rs. 3–9 [illegible] Rs. 5–12 for 'wet' land.

The *prānt* contains six municipalities, two of which—Navsāri and Gandevi—have partly elective boards, with a total income of Rs. 12,000 from customs, excise, and tolls, besides a grant of Rs. 5,500, while the other four—Bilimora, Kāthor, Vyāra, and Songarh—derive their income of Rs. 4,000 entirely from grants from the State. A District board and local boards were constituted in 1905.

The administration of the *prānt* is carried on by the *Sūbah*, who has his head-quarters at Navsāri. Here also are the court of the *prānt* Judge and the head offices of other departments. Education is well provided for, as there are two high schools (at Navsāri and Gandevi), three Anglo-vernacular schools, and 211 vernacular schools, the total number of pupils in 1904–5 being 13,133. At the civil hospital at Navsāri town and seven dispensaries elsewhere, 41,266 patients were treated in 1904–5, of whom 74 were in-patients.

Navsāri Tāluka.—South-western *tāluka* of the Navsāri *prānt*, Baroda State, with an area of 125 square miles. Population rose from 53,523 in 1891 to 59,875 in 1901. The *tāluka* contains one town, NAVSĀRI (population, 21,451), the head-quarters; and 60 villages. It is a flat plain, with two rivers running through it, the Mindhola on the north and the Pūrna on the south. The soil is black, *gorāt* or light

[illegible], and *besār* or mixed, except in the western part, which is marshy swamp. Among the chief crops produced are *jowār*, rice, cotton, castor-seed, and sugar-cane. In 1904-5 the land revenue was Rs. 2,37,900.

Navsāri Town.—Head-quarters of the *prānt* of the same name, Baroda State, situated in 20° 57′ N. and 72° 56′ E., 147 miles from Bombay, with which it is connected by the main line of the Bombay, Baroda, and Central India Railway. It is an ancient place, known to Ptolemy as Nasaripa. Population (1901), 21,451, including 12,397 Hindus, 4,756 Pārsis, and 2,753 Musalmāns. The town is intimately connected with the history of the Pārsīs in India. After the flight from Persia of those Zoroastrians who refused to abandon their faith at the bidding of the Muhammadan conquerors, a large band landed on the western coast of Gujarāt, of whom some betook themselves to Navsāri in 1142. Here they throve and prospered, and their *mobeds* or sacerdotal class thereafter made the town their stronghold, a position which has been maintained to the present day. The town itself shows signs of comfort and [illegible] of wealth, the streets are well watered, and the sanitation [illegible]worthy. In the country round about are numerous [illegible] houses with [illegible] gardens, the property of wealthy Pārsi [illegible] who have [illegible] from business elsewhere to their ancestral home. In the [illegible]hood of these houses are plantations of date [illegible] which [illegible] visitors and [illegible] [illegible] the nature of [illegible] the [illegible] of the district. [illegible] grow everywhere, and the toddy that is obtained near [illegible] is deemed the most delicious and healthy. Owing to the proximity of the town to the sea, the climate is pleasant from the middle of April to the middle of June, as a mild breeze constantly cools the air. The water too is accounted most wholesome. Malhār Rao Gaikwār was fond of living here, and it was in this town that he was married for the fourth time. Before celebrating the nuptials he was married in due form to a silk cotton-tree, which was then formally destroyed, the object being to avert misfortune. He had been married twice, but had no son and heir; and it was hoped by destroying his third wife, the tree, that his fourth venture would prove fortunate. Among public buildings of importance are the high school and the Anglo-vernacular school, the former known as the Sir Kawasjī Jahāngīr Zarthosti Madrasa, and the latter as the Dādābhai Kawasjī Tata school. Both buildings are modern, and the Baroda State has liberally assisted in their construction and maintenance. There are also a civil hospital, a public market, a library and reading-room, a jail, a distillery, and fine offices for the *Sūbah* and *prānt* Judge. Among other objects of interest in Navsāri are the Towers of Silence for the reception of the Pārsī dead, the large Fire-Temple known as *Atash*

Bahrām, and the smaller ones or *agiāris*. To the larger temple all the young *mobeds* from Bombay and elsewhere are sent for confirmation, or to receive the apostolic succession of their order.

The town was once famous for its cotton cloth, which was in great demand at the English and Dutch factories of Surat in the seventeenth and eighteenth centuries for export to Europe, but this is produced no longer. Hand-loom weaving is carried on to some extent, but only coarse garments are made. The manufacture of the *kusti* or sacred thread of the Pārsīs, woven only by the wives of the *mobeds*, is however a work of considerable skill. The threads are largely exported to all parts of India, and the monopoly secures an industry to *mobed* ladies. There is also a soap and perfumery factory on the outskirts of the town, which has met with some measure of success. Many workers produce articles of copper, brass, iron, wood, and leather, for local use. A boot and shoe manufactory has lately been established.

Navsāri is administered by a municipality, reorganized in 1905 on a partly elective basis, which has an income of Rs. 8,500 from customs, excise, and tolls, besides a State grant of Rs. [illegible]500. The town has a large import and export trade both by rail and water. For the latter the Pūrna river, on the left or south bank of which the town is situated, affords fair conveniences, and the harbour is being improved.

Nāwa.—Town in the Sāmbhar district of the State of Jodhpur, Rājputāna, situated in 27° 1′ N. and 75° 1′ E., on the northern edge of the Sambhar Lake, about a mile east of Kuchāwan Road station, a junction of the Rājputāna-Mālwā and Jodhpur-Bīkaner Railways. The town is walled, and had in 1901 a population of 5,640. There is a large export trade in salt, the manufacture of which supports a considerable proportion of the people. Another important industry is the manufacture of quilts embroidered with elaborate designs. In the town are a post office, an Anglo-vernacular school, and a small hospital. A separate district of Nāwa existed up to 1902–3, when it was amalgamated with that of Sāmbhar.

Nawābganj Tahsīl (1).—Head-quarters *tahsīl* of Bāra Bankī District, United Provinces, comprising the *parganas* of Nawābganj, Partābganj, Satrikh, and Dewā, and lying between 26° 43′ and 27° 8′ N. and 81° 1′ and 81° 26′ E., with an area of 361 square miles. Population increased from 242,975 in 1891 to 254,160 in 1901. There are 390 villages and five towns, NAWĀBGANJ (population, 14,478), the *tahsīl* head-quarters, and ZAIDPUR (9,700) being the largest. The demand for land revenue in 1903–4 was Rs. 4,95,000, and for cesses Rs. [illegible],000. The density of population, 704 persons per square mile, is the highest in the District. The *tahsīl* is bounded on the north-east by the Kalyānī, and the southern part is drained by the Reth, both rivers being tributaries